University of Alberta

A grounded theory study of the new nurse's journey toward competence in clinical judgement

by

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Abstract

Clinical judgement, an essential component of clinical competence, incorporates scientific and practice knowledge, clinical decision making, critical thinking, clinical skills, and moral development. Clinical judgement is a critical element of professional competence, and is necessary for safe effective client care and effective evidence-based practice. Using grounded theory method, I explored the process in which new baccalaureate registered nurses engage as they develop their clinical judgement over their first two years of nursing practice. Twenty-five Registered Nurses with two to three years of experience in acute care clinical nursing practice in Canada participated in semi-structured interviews over a period of 16 months of data collection and analysis. Using constant comparative analysis, I explicated a theory that explains the process of developing clinical judgement in nursing practice. This grounded theory is integrated by the basic social process of *seeking learning* in clinical practice. Pervading themes included new nurses' needs and desires to learn in clinical practice, the importance of the social network for learning in clinical nursing practice, and new nurses' desires to be supported in learning by their employing agencies.

The Theory of Developing Clinical Judgement in Practice, based in experiential learning in clinical practice, details how new nurses use scientific, professional, personal, and ethical knowledge in the process of converting their experience to practice knowledge as the basis for clinical judgement. Five stages are evident in this process; *orientating to the practice environment, learning practice norms, developing confidence, consolidating relationships*, and *seeking challenge*. New nurses progress through these stages in a predictable fashion and within general time frames depending on the acuity and diversity of the client group, the supportive learning network in the workplace, availability of learning resources and formal learning opportunities, feedback, and incremental increases in responsibilities. Facilitative factors such as mentoring, continuing education, availability of practice advisors, and a culture that supports learning in the practice setting support new nurses in their development. These findings will assist nursing leadership and clinical educators in supporting new nurses to develop their clinical judgement more efficiently and effectively, ultimately contributing to the quality of health care provided to clients.

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CHAPTER 1

INTRODUCTION

Overview

In an increasingly complex and demanding health care system, nurses make many decisions in practice that have significant and life-impacting effects on their clients. In this current system, practitioners must make effective, defensible, efficacious, and cost-effective decisions that are acceptable to their clients (Kitson, Harvey, & McCormack, 1998). Nurses entering practice for the first time have the required knowledge, skills, and competencies of a beginning practitioner and can practice at the "safe" level (Alberta Association of Registered Nurses [AARN], 2000; Saskatchewan Registered Nurses Association [SRNA], 1999). They need practice experience under the supervision of more experienced nurses in order to develop their clinical judgement and associated clinical decision making skills to the level of competence. Until they have attained a competent level of practice, they are unable to assume the professional autonomy and accountability that are characteristic of competent practice (Bradshaw, 1997). Unfortunately, shortly after their orientation periods end, many entry-level nurses must assume responsibility for client care before they are competent to practice autonomously, often without the needed supervision of more experienced nurses. These new nurses may not have developed their clinical judgement sufficiently to deal with some of the demands of clients in their care.

Benner (1984) identified the Competent Stage in the development of nursing practice expertise as having been achieved by two years into professional nursing practice. Although clinical competence includes technical skill and organizational ability, the most important aspect of clinical competence is clinical judgement, including the clinical knowledge and clinical decision making that comprise it. Clinical judgement, the most elusive aspect of clinical competence, is very difficult to teach and even more difficult to evaluate as it involves thinking processes in practice (Benner, Tanner, & Chesla, 1996a). Achieving the competent level of clinical practice, especially in the area of clinical judgement, is a critical stage in the development of new nurses. From Benner's work, we know how competent nurses *act* in practice; however, we have very little knowledge of how new nurses *develop* their competence, particularly in the area of clinical judgement.

Building on research on critical thinking and clinical decision making in practice, we need to explicate knowledge about the process of developing clinical judgement in practice, including antecedent and contextual factors affecting its development. Literature on clinical competence, clinical judgement, critical thinking, nursing expertise, and knowledge utilization provides perspectives on competence in clinical practice and on the attainment of Benner's Competent Stage. Most authors have explored clinical decision making or clinical judgement by testing theories from other disciplines in the nursing setting (Kuhn, 1999; Thompson, 1999; May, Edell, Burell, Doughty, & Langford, 1999; Buckingham & Adams, 2000; Hamers, Huijer Abe-Saad, & Halferns, 1994; Fonteyn & Ritter, 2000). With the exception of the work of Benner and her colleagues (Benner, 1984), inductive explanation of the process of developing clinical competence and clinical judgement in nursing is limited (Garland, 1996; Benner, Tanner, & Chesla, 1996b; Benner, Hooper-Kyriakidis, & Stannard, 1999). Furthermore, the process that nurses experience in developing their competence, particularly their clinical decision making and clinical judgement, needs more thorough examination. We need more knowledge about the influence of nurses' basic education programs and continuing education experiences on the development of new nurses' clinical judgement. Lastly, factors in the practice setting that affect new nurses' development of clinical competence and clinical judgement must be explored in greater depth.

This research is needed to address the question of how new nurses develop competence in their clinical judgement. Because there is so little research conducted about the process of developing judgement, a qualitative approach is the best method of exploring this process and explicating the factors that affect it.

Conceptual Approach

The question of how entry-level nurses develop their clinical judgement to the competent level of practice was addressed through grounded theory methodology. This methodology was the most useful way of exploring the process that new nurses experienced in developing competence in clinical judgement. In particular, we need to explore the process of developing clinical judgement to the competent level, identifying those factors in both practice and the basic educational program that support the development of that judgement. Part of this clinical judgement encompasses how nurses early in their nursing practice think about their clients' situations and progress (Benner, 1984; Benner, Tanner, & Chesla, 1996b) and how they use critical thinking and clinical knowledge to support their decisions (Epstein & Hundert, 2000).

While the researcher using grounded theory is not generally guided by a conceptual framework, I have made repeated reference to the work of Patricia Benner and her colleagues (Benner, 1984; Benner, Tanner, & Chesla, 1996b) in this study. Benner identified five stages in the development of nursing expertise in clinical practice and connected these stages with years of clinical practice. This prior research has been widely accepted as a description of the stages in the development of expertise in nursing practice. I have positioned this study within the context of Benner's work (Benner, Tanner, & Chesla, 1996b), and specifically have described the process of moving from the Advanced Beginner to Competent stage of nursing practice with a focus on the development of clinical judgement in practice.

Benner and her colleagues (Benner, 1984; Benner, Tanner, & Chesla, 1996b) also indicated that merely being in practice for a specific length of time is not a sufficient condition for the development of practice expertise: that is, experience alone does not account for the development of expertise. Other factors such as a supportive work environment and critical reflection by the practitioner are involved in the development of expertise, although we do not know how these factors contribute or how they are experienced by nurses involved in the process of developing competence.

Using grounded theory methodology, I explored nurses' experiences of developing their clinical competence, focusing on their clinical decision making and clinical judgement, as recalled by nurses with two to three years of practice experience. Through analysis of findings, I developed a theoretical framework of how new nurses develop their competence in clinical judgement in practice. I have identified the stages that new nurses experience as they develop their clinical judgement to the competent level. I have also identified contextual factors in the practice environment and antecedent factors from new nurses' educational experiences that affect the development of clinical judgement in nursing practice. This knowledge of the process of developing clinical judgement in practice can be used to facilitate new nurses' transition to practice and assist in the development of safe autonomous accountable practitioners in a more timely and efficacious manner.

Purpose

The purpose of this study was to explore and theorize the process of new nurses' development of their clinical competence and clinical judgement during the first two years of nursing practice.

Research Questions

This study was guided by the following general questions to explore the process that new nurses experience in developing their clinical judgement in practice.

1. How do new nurses develop their clinical judgement in practice during their first two years of practice?
2. How do new nurses conceptualize competence in clinical judgement?
3. What sources of evidence do new nurses use to support their clinical decisions in the first two years of practice?
4. What factors in the practice environment of new nurses support or hinder the development of their clinical judgement?
5. What factors from the educational experiences of new nurses, both basic nursing education and continuing education programs, support or hinder the development of their clinical judgement?
6. How do new nurses perceive that their clinical judgment was developed during their educational program?

Significance

Enhancing our understanding of how new nurses develop competence in practice, especially in their clinical judgement, will facilitate more effective approaches to new graduate nurse orientation and support in practice. Richer understanding of this intangible phenomenon will facilitate enhancement of effective approaches to new nurse orientation and support in the practice environment, enhancement of educational experiences in both basic education programs and continuing education experiences, and removal or amelioration of deleterious factors affecting the development of clinical judgement in the practice environment.

The acute care sector of Canada's health care system is organized around the premise that nurses' clinical judgement enhances the quality and effectiveness of client care (Daly, 1998; Tanner, 1999; Tanner, 2000; Benner, Tanner, & Chesla, 1996b; Bradshaw, 1997). Nurses make many critical decisions regarding the care of their clients in the acute care settings. Enhancement of these decision making abilities is critical to the effectiveness of the health care system in responding appropriately and in a timely manner to changes in client situations. Unfortunately, because our understanding of the process is limited, we are uncertain about the efficacy of the current practices and whether these strategies currently address the issues that new nurses encounter in the process of developing their clinical judgement.

As nurses attain seniority and experience in the practice setting, they tend to work with greater autonomy within a demanding and interdependent health care system; therefore, support for nurses to competently and confidently enact their clinical judgement and make prudent and insightful decisions assumes prime importance (Wade, 1999; Finn, 2001). For new nurses with beginning levels of clinical judgement, the impetus to develop such competence is strong. The recent emphasis on evidence-based nursing practice and the need for efficacious approaches to client care make this need even more significant and imperative. Through the findings of this study, I have developed a theoretical model that provides valuable information about how new nurses develop their clinical competence and clinical judgement, including their clinical decision making and clinical knowledge.

CHAPTER 2

EXTANT STATE OF THE LITERATURE

In grounded theory, researchers use the literature to identify gaps or omissions in the research about a specific topic, and to sensitize researchers to the need for a particular research study. In the area of the development of competence in clinical judgement, most of the literature is anecdotal and addresses theoretical conjecture about the phenomenon of clinical competence. Four areas of related literature were accessed to identify the ideas that will inform this fieldwork: clinical competence, clinical judgement, critical thinking, and knowledge utilization. Each of these areas addresses a part of the topic, but none addresses the process of developing competence in clinical judgement. This literature formed the basis for the questions that guided this grounded theory.

Clinical Competence

Definitions of Competence

The term *competence* has many meanings in nursing practice, adding to the confusion of terms in current practice (Girot, 1993; Eraut, 1998; Gonczi, 1994). In addition, the terms *competence* and *competency* are often used interchangeably. Competence refers to the ability or attributes underlying performance, and competency to the performance or behaviour itself (Hoffman, 1999). In its simplest form, competence is defined as the ability to perform the tasks and roles required of a practitioner to an accepted standard, and a competency is defined as the specific task or skill that is a constituent of that competence (Eraut; Fearon, 1998; Watson, Stimpson, Topping, & Porock, 2002). Hoffman differentiated between mere performance of the skill, and performance of the skill to a specific standard or quality of performance, usually as a reflection of the goals of the organization.

The traditional conception of competence involves competence as performance, involving one's ability to perform specified tasks or skills of the role, and forms the basis of competency-based education (Gonczi, 1994; Eraut, 1998). In this perspective, one may be competent in the performance of a specific skill, but not viewed as a competent practitioner (Chambers, 1998). Competence can also be viewed as possessing a set of skills needed to manage a particular situation (Kowalske & Sliwa, 2000). This approach is currently viewed as reductionist, behaviourist, simplistic, and inconsistent with the nature of professional practice, resulting in professional education moving away from such an approach (Benner, 1982; Redfern, Norman, Calman, Watson, & Murrells, 2002; Girot, 1993). Although the performance of technical skills is considered an important part of professional practice, the concept of competence extends beyond the idea of mere technical skill performance. This performance-based view is the conception of competence often held by the public but not by the professions (Eraut). In recognition of the place of technical or functional skills in practice, nursing has developed approaches to teaching and evaluating technical skill development (Bjork, 1999; Girot; Nicol, Fox-Hiley, Bavin, & Sheng, 1996; Redfern et al., 2002).

In the two more commonly held approaches, competence is conceptualized as a psychological construct that incorporates cognitive, affective, and psychomotor skills for practice. One approach views competence as general attributes such as critical thinking skills without consideration of the context of performance. The other approach to competence, wherein competence is considered the general attributes of practitioners in specific contexts of practice, is the one that most professional education programs such as nursing and medicine use (Gonczi, 1994; Watson, Stimpson, et al., 2002; Redfern et al., 2002). This approach to competence also incorporates ethics and values and the need for reflective practice with due consideration of the importance of the context of practice. Competence as a psychological construct is a complex entity that is inferred from performance since it cannot be assessed directly (While, 1994). Eraut (1998) described competence as an underlying characteristic and combination of attributes, including knowledge, skills, attitudes, and beliefs that integrate attributes with performance.

Faculty in various educational programs, particularly in the United Kingdom and Australia, have attempted to identify the specific competencies of competent practitioners in various practice areas in nursing, and have encountered difficulties. The recent move to competency-based education in both countries has focused attention on overall competence in nursing practice (Watson, Stimpson, et al., 2002; Watson, Calman, Norman, Redfern, & Murrells, 2002; Norman, Watson, Murrells, Calman, & Redfern, 2002; Watson, 2002; Redfern et al., 2002; Gonczi, 1994). In Canada, professional nursing associations have used a similar approach to identify entry-level competencies for new nurses entering practice (Alberta Association of Registered Nurses, 2000; Saskatchewan Registered Nurses Association, 1999). These competencies identify the minimum expected competencies for new nurses, but do not reflect the expected performance of competent practitioners. Educational programs and professional nursing associations acknowledge that these foundational competencies are minimum expectations of new nurses and that practicing nurses will develop their skills and abilities to higher levels of performance through experiential learning in practice (AARN, 1999; National Nursing Competency Project, 1997; SRNA, 1999).

Benner's Competent Stage

In describing the development of expertise in nursing practice, Benner (1984) conceptualized competence as one of the stages in the development of expertise, wherein performance is adequate and meets expectations, and the nurse is capable of practice with a higher degree of autonomy and accountability, within the scope of autonomous practice in an interdependent practice environment (MacDonald, 2002). Benner, and Benner, Tanner, and Chesla (1996b) explored stages of nurse expertise through hermeneutic phenomenology, by eliciting nurse narratives and observing actions in nursing practice.

Benner, Tanner, and Chesla (1996b) identified five stages that nurses can achieve in practice; novice, advanced beginner, competent, proficient, and expert, and correlated these stages to length of practice with specific client groups. Novices such as nursing students are individuals who are new to a particular practice, lack experiential knowledge in the area, and use specific rules and theoretical knowledge guide practice. Advanced beginners such as new graduate nurses have more experiential knowledge but it is limited, and thus, rules and principles are primarily used to guide practice. Nurses at the competent level have gained experiential knowledge in addition to their theoretical knowledge. Typically, nurses at the competent level demonstrate increased clinical understanding and manage the usual contingencies of practice effectively and autonomously. Nurses at the proficient level are in transition to the expert level of practice, and show greater levels of mastery and proficiency in the assessment of client situations and the provision of nursing care. Expert practice is characterized by engaged practical reasoning, increased intuitive links between identifying the important aspects of client situations, and concerned ways of responding to these situations.

Benner (1984) stated that new graduates enter practice at the advanced beginner level, and after two years of practice, usually have attained the competent level. She described the advanced beginner as a new registered nurse who has met the expectations of the profession's regulatory body to qualify for licensure as a nurse. As Eraut (1998) pointed out, being qualified and being competent in professional practice are two different states. Benner categorizes the practice of these new nurses at the advanced beginner level, which is characterized by marginally acceptable performance and the application of context-free rules, guidelines, and procedures; in short, they rely on their propositional knowledge. These new practitioners do exhibit some response to "aspects of the situation," the recurring meaningful situational components of client situations, but their responses are limited by their lack of experience. These new nurses need support in practice since they usually function on general guidelines, respond to "aspects of the situation" in a very limited manner, and fail to identify the most relevant or salient aspects of the client's situation. The quality of client care may suffer through their lack of experience (Benner; Benner, Tanner, & Chesla, 1996b).

Competent is the next level in the development of practice expertise (Benner, 1984). Benner conceptualized the competent stage as occurring after two years of practice with the same or similar client populations. This stage is characterized by increased clinical understanding and the ability to anticipate the likely course of events for typical clients, and improved technical skill and organizational ability. At the competent stage, Benner, Tanner, and Chesla (1996b) described nurses' decision making as conscious and deliberate. Because the nurse at the competent level has the perspective of long-range goals or plans, the nurse is better able to identify salient aspects of the client situation in terms of these goals. Although the nurse at the competent stage lacks the speed and flexibility of the expert practitioner, the nurse does express a sense of mastery and the ability to manage the usual contingencies of practice with a specific client group with efficiency and organization. According to Bradshaw (1997), the nurse at the competent level is capable of practice with autonomy and accountability, and demonstrates conscious and deliberate decision making. Because professional autonomy is enacted within a social milieu of interdependent practice among nurses and other health care professionals, new nurses do not attain complete autonomy, but rather, relational autonomy within the workgroup (Chase, 1995; MacDonald, 2002).

The work of Benner and her colleagues has been seminal in exploring developing competence in professional practice. It is used extensively within the discipline of nursing to identify stages of professional development, and in some jurisdictions, to guide professional educational programs.

Conceptualizations of Competence

Other authors have enlarged our understanding of the term "competence." Using the general attributes in specific contexts approach to defining competence, and referring specifically to medicine, Epstein and Hundert (2002) described professional or clinical competence as:

> the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served. Competence builds on a foundation of basic clinical skills, scientific knowledge, and moral development. (pp. 226-227)

Epstein and Hundert concurred with Benner, Tanner, and Chesla (1996b) in describing clinical competence as including a cognitive function and domain-specific knowledge used in problem solving, an integrative function in using biomedical and psychological knowledge in clinical reasoning, a relational function in one's relationships with patients and colleagues, and an affective or moral function relating to the predisposition to use one's skills judiciously and humanely. Epstein and Hundert also indicated that competence depends on critical thinking and habits of the mind, including attentiveness, critical curiosity, self-awareness, and presence, and is developmental, impermanent, and context-dependent. Epstein and Hundert reflected the complexity of competence in professional practice and incorporated the concepts of clinical reasoning, clinical judgement, evidence-based practice, and critical thinking as part of professional competence.

In the only retrieved study of the development of clinical competence, Ramritu and Barnard (2001) used a phenomenological approach to explore how six nurses with three months of clinical practice conceptualized competence in their practices. Not surprisingly, these new nurses identified safe practice as *the* critical component of competence. They described competence as limited independence, utilization of resources, management of time and workload, ethical practice, performance of clinical skills, and knowledge. All recognized that their competence was developing and that in comparison with other nurses in their nursing units, they were at the bottom of the hierarchy of practice competence. According to Benner, Tanner, and Chesla (1996b), these new nurses would likely reflect the advanced beginner level of practice expertise, and may not have fully developed their concept of competence, in part, due to their limited practice experience in the new roles. Such was the case in a South African study of the perceptions of 259 senior professional nurses of the competencies of newly-qualified nurses, where most senior nurses were very skeptical about the practice competencies of new nurses (Khoza & Ehlers, 1998).

Due to the limitations of Ramritu and Barnard's study (2001), the new nurses' conceptions of competence may be a reflection of the educational preparation for practice, and not indicative of competence in practice in its fullest sense, particularly since these nurses had limited independent clinical practice in their first three months. Considering that Benner conceptualizes competent practitioners as having two years of experiential learning that contributes to the development of that competence, particularly in the area of clinical judgement, it is unlikely that the performance of the new nurses in Ramritu and Barnard's study would meet Benner's characteristics of competent practice. A valuable aspect of this study may be the comparison of these participants' conceptualizations of clinical competence to that of Benner et al., whether their conceptualizations are gained through formal learning or their limited experience. Since the nurses in this study were at the beginning of their careers, their initial conceptualizations of competence would likely guide them in their further development of clinical judgement and competence in practice.

From the literature, I have gleaned a general understanding of the term *competence* as a beginning point for this study. *Clinical competence*, also referred to as professional competence, is the state of possessing and enacting the expected competencies for a nurse providing autonomous and accountable nursing care for a specific group of clients in a specific setting. Clinical competence has cognitive, psychomotor, and affective components and reflects particular ways of thinking in professional practice. *Competence* is a psychological construct referring to the state of possessing attributes of knowledge, skills, abilities, and attitude that enable the nurse to work with relative autonomy and accountability within a specific setting. *Competency(ies) is (are)* the specific skills and abilities that constitute competence in a role in a particular setting. *Entry level practice competencies* are those competencies that a new nurse is expected to possess on entry to practice that are usually gained through basic nursing education programs. These competencies make provision for minimally acceptable performance under the supervision of more experienced nurses.

Clinical Judgement

Conceptualizations of Clinical Judgement

Clinical judgement is an elusive term that is frequently used in professional practice but is poorly defined in practice or in the literature. Unfortunately, to add to the confusion about clinical judgement, it is also a term that is often used interchangeably with critical thinking, clinical decision making, and problem solving (Jones & Brown, 1991), even though the process of using clinical judgment incorporates each of those processes (Jones & Brown, 1993; Tanner, 1993; Videbeck, 1997b). Both Kataoka-Yahiro and Taylor (1994) and Case (1998) conceptualized clinical judgment as the outcome of critical thinking in practice, in part, minimizing the complexity of clinical judgment and reducing clinical judgment to one of its components. Others equate clinical judgment with clinical decision making and again, reduce its complexity (Brooks & Thomas, 1997).

Benner (1984) and Benner, Tanner, and Chesla (1996a) identified clinical judgement as the most important aspect of practice that differentiates levels of clinical expertise, as did several other authors (del Bueno, 1990; Downie, MacNaughton, & Randall, 2000; Oermann, 1999). Through their phenomenological research, Benner, Tanner, and Chesla defined clinical judgement as "the ways in which nurses come to understand the problems, issues, or concerns of clients/patients, to attend to salient information, and to respond in concerned and involved ways" (p. 2). Clinical judgement is developed through clinical practice and reflection on one's experiences, and is dependent on clinical knowledge embedded in practice. Clinical judgement incorporates knowing the patient as a person, as well as the notion of moral decision making that is socially constructed and embedded in the knowledge of the discipline (Benner; Benner, Tanner, and Chesla, 1996b; Benner Hooper-Kyriakidis, 1999; Epstein & Hundert, 2002). Gordon, Murphy, Candee, and Hiltunen (1994) using an information processing approach to clinical judgement, proposed a model that integrates diagnostic-therapeutic judgements with ethical judgements, stating that the decision making processes are similar in both types of judgements. However, this model may be more linear than the model that Benner proposed, and may misrepresent the complexity of clinical decision making.

Epstein and Hundert (2002) described clinical judgement as an essential skill of clinical competence, which is built on a foundation of clinical skills, scientific knowledge and moral development, and incorporates skills of clinical decision making and critical thinking. Clinical judgement involves the integration of psychosocial knowledge of the person and biomedical knowledge in clinical reasoning, combined with a cognitive function and a relational function in the decision making (Epstein & Hundert). Clinical judgment involves the use of knowledge, both formal and practice, in decision making in practice, with a connected sense of the context of that decision making, or as Benner, Tanner, and Chesla (1996a) described it, practical engaged reasoning.

Generally, clinical judgement is presented as a phenomenon that develops with practice experience and reflects increasing competence and expertise in practice in specific situations. Initially, Benner (1984) used clinical judgement in practice to differentiate the different levels of expertise in practice, without describing clinical judgment in detail. Later, Benner, Tanner, and Chesla (1996a) explored the concept of clinical judgment in detail and elaborated on its constituents and development. Based on developing clinical judgment, Benner suggested that most new nurses need two years of continuous practice with a particular client group to achieve the level of competent practice wherein the nurse can practice with accountability, autonomy, and confidence to cope with the usual contingencies of practice. In contrast, del Bueno (1990) reported that new nurses by self-report achieved competence in clinical judgment after approximately eight months of practice.

Downie, MacNaughton and Randall (2000) described clinical judgement in medicine as having two aspects, technical judgement, referring to the scientific basis for those judgements, and humane judgement, acknowledging the art of clinical judgement in medicine. For both medicine and nursing, incorporating scientific knowledge into practice is a clearly identifiable part of making decisions, particularly in the current evidence-based practice milieu (Estabrooks, 1998). However, the art of the discipline, humane judgement, and knowing the patient are more abstract aspects of clinical judgement, and are embedded in practice. This tacit knowledge of practice makes clinical judgement difficult to illuminate in practice, and even more difficult to use as an indicator of increasing expertise in practice. Nonetheless, without knowing how this clinical judgement develops, Benner (1984) has used clinical judgement to differentiate the stages of expertise in nursing practice.

Components of Clinical Judgement

Most definitions of clinical judgement encompass four key components. The first component is practice knowledge, which is identified as the elusive and difficult to enunciate tacit knowledge embedded in practice. The second component, clinical decision making, refers to how practitioners make decisions in practice. The third component refers to knowledge of the individual client and its impact on the application of knowledge to that person's situation. The fourth component refers to moral commitment in the provision of care to clients.

Practice knowledge. Practice knowledge is a key element in the discussion of clinical judgment. In exploring the knowledge underlying nursing practice, Carper (1978) identified four patterns of knowing that are inherent in nursing practice: scientific (empirical knowing), aesthetic (the art of nursing), personal (therapeutic use of self), and ethical (moral knowledge). These four ways of knowing constitute a nurse's knowledge(s) in practice, and direct that nurse's clinical judgement in practice. White (1995) added socio-political knowing as the fifth way of knowing, indicating that clinical judgements are formulated with a sense of the context of the situation. Benner, Tanner, and Chesla (1996b) built on these four (or five) ways of knowing in clinical practice to conceptualize clinical judgement in greater depth. Carper's ways of knowing are reflected in the practice knowledge of nurses, but this knowledge is tacit knowledge that is difficult to enunciate (Jenks, 1993; Tanner, Benner, Chesla, & Gordon, 1993). Thus, practice knowledge is not transmitted through formal educational experiences, but within the context of practice through experience, mentoring, modeling, or narratives of practice (Benner, Tanner, & Chesla).

Clinical judgment of new practitioners is limited by their lack of experience with a specific group of clients. Their practice knowledge is poorly developed since they often do not have a sense of the usual health or illness experiences of specific client groups or typical responses of the clients. Thus, new nurses initially rely on formal, propositional, or scientific knowledge and limited practice knowledge learned in their educational or orientation programs. With experience, new nurses acquire practice knowledge that facilitates their clinical judgement.

As Benner, Tanner, and Chesla (1996b) indicated, new nurses need extensive experience with many individual clients with similar health issues to create an experiential knowledge base and a mindset for pattern recognition that alerts them to possible issues and concerns in particular situations. This practice knowledge is integrated with formal scientific knowledge in the provision of care to clients (Carper, 1978; Epstein & Hundert, 2002), whereas for expert nurses, practice knowledge may be the pre-eminent type of knowledge used (Estabrooks, 1998). Eraut (1994) described professional knowledge as systematic, specialized, scientific, standardized, and firmly bounded relative to other professions; in other words, knowledge that can be conveyed to new members of the profession in educational experiences. Unfortunately, none of these terms refers to practice knowledge, which Benner, Tanner, and Chesla identified as critical to the development of practice expertise.

Practice knowledge is, by definition, knowledge that is individually and socially constructed through interactions in practice, learning in practice, discovery, or testing of knowledge claims, and is embedded in that practice (Higgs & Titchen, 2000). The art of practice (Johnson & Ratner, 1997), aesthetic knowing (Carper, 1978), humane judgement (Downie et al., 2000), practical knowing (Benner, 1984), and professional craft knowledge (Higgs & Titchen, 2000) are terms used to refer to the tacit knowledge of practitioners. Higgs and Titchen suggested that knowledge construction in practice is a dynamic process involving the constant testing and revision of that knowledge as the practitioner interacts in new experiences, including encounters with the knowledge, both scientific and experiential, of others. As such, experiential knowledge development is incremental and on going, and context-dependent. The development of practice knowledge is dependent on a base of knowledge (domain specific knowledge) that is gained through formal education; however, practice knowledge contextualizes propositional knowledge to the specific needs and issues of the client group. Schön's (1983) "reflection-in-action" provides the link between the professional practice environment, which includes instability, complexity, uncertainty, uniqueness, and values conflicts, and the knowledge and practice of the practitioner.

Clinical decision making. Clinical decisions are the outcomes of cognitive processes and guide further action (Lauri et al., 2001). There is a great deal of controversy as to *how* nurses and other practitioners use their knowledge, whether propositional, practice, or personal, to make decisions in practice. Thompson (1999) described clinical decision making as the operationalization of clinical knowledge, suggesting that many terms such as clinical reasoning, clinical judgement, clinical inference, and diagnostic reasoning all refer to the same process and outcome of that process. As Schön (1983) indicated, the challenge of making decisions in a state of uncertainty is a daily occurrence for most health care practitioners including nurses. Thompson and Dowding (2001) suggested that there are three different types of uncertainty arising in practice: a) having incomplete or imperfect knowledge from the situation (assessment data), b) having limited current empirical knowledge with which to make the decision (research-generated knowledge), or c) a combination of both.

The controversy centres on how nurses address uncertainty in their practices. Thompson (1999) described two approaches to clinical decision making: the hypothetical-deductive and rational approach that focuses on information processing in the practice situation, and the humanist-intuitive approach that explains clinical decision making through an intuitive process. As Thompson reported, most of the research on decision making in nursing has focused on the hypothetical-deductive or the technical-rational approach. As a result of Benner's work (Benner, 1984; Benner, Tanner, & Chesla, 1996b) on the development of expertise in nursing, the humanist-intuitive approach has received the most attention, but limited research in nursing.

The hypothetico-deductive approach is a model of clinical reasoning that involves two phases. During the first phase, the generation of hypotheses is based on initial data collection and knowledge of the client situation (inductive phase). During the second phase, further inquiry into the client situation is used to determine the relevance and effectiveness of the hypotheses in explaining the client situation (deductive phase) (Buckingham & Adams, 2000). The four stages of information processing that underpin this approach include cue acquisition, hypothesis generation, interpretation of evidence in light of the hypotheses, and evaluation to determine appropriate decision(s) based on the weight of evidence (Thompson, 1999). Higgs and Jones (2000a) proposed a similar process that involves spirals or repetitions of the hypothesis generation and testing process to achieve progressively broader and deeper understanding of the clinical problem. Also called analytical thinking (Lauri et al., 2001), this decision making is characterized as step-by-step, conscious, and logically defensible. Benefits of this type of clinical reasoning are that decisions are communicable, rational, and more overt (Thompson, 1999), and thus can be taught to new practitioners as well as researched. Evidence-based practice is premised on such a logical approach to decision making (Evidence-Based Medicine Working Group, 1992).

On the other hand, the intuitive-humanist stance on decision making is discussed extensively in the literature by Benner who is one of the chief proponents of the role of intuition in expert nursing judgement (Benner, 1984; Benner, Tanner, & Chesla, 1996b). By definition, intuitive decision making is described as understanding of a situation without rationale (Benner, Tanner, & Chesla). Knowledge is gleaned as a whole, without the use of a linear reasoning process (Lamond & Thompson, 2000), and an understanding of the situation based on knowledge, feelings, and experience (McCutcheon & Pincombe, 2001). Intuition is conceptualized as an invisible and embedded process that is not explicit, even to the thinker. Using the Dreyfus and Dreyfus model of expertise, Benner, Tanner, and Chesla identified six aspects to intuitive thinking: pattern recognition, similarity recognition, common-sense understanding, skilled know-how, sense of salience, and deliberative rationality.

Intuitive judgement is seen as a distinguishing characteristic of the expert practitioner, wherein the practitioner no longer relies upon propositional knowledge to assess client situations and take appropriate action (Benner, Tanner, & Chesla, 1996b; Higgs & Jones, 2000b; Lamond & Thompson, 2000; Thompson, 1999). For a variety of reasons, the decision making process appears unconscious or intuitive, and the antithesis of evidence-based decision making. Nonetheless, intuition is based on background understanding, including propositional and tacit knowledge, knowledge of the patient, and skilled clinical observation (King & Appleton, 1997). Although intuitive judgement is identified as a characteristic of the expert practitioner, several authors have suggested that intuitive approaches may also be used by novices and advanced beginners, but this approach to decision making in not acceptable in less experienced and less credible practitioners due to their lack of practice knowledge and perceived credibility (Lamond & Thompson).

Some authors present intuition as pattern recognition, where the practitioner recognizes a pattern in the situation or has direct automatic retrieval of information from a well-structured knowledge base that includes propositional and experiential knowledge (Higgs & Jones, 2000b; Elstein & Schwartz, 2000). Patel, Arocha, & Kaufman (1999) described a form of pattern recognition used in medicine where practitioners use backward reasoning to explore an hypotheses that has been generated, relying on past learning and a deductive approach to decision making, and forward reasoning where pattern recognition and a solid knowledge base results in an inductive approach to diagnosis. Expert practitioners use forward reasoning in most situations in their everyday practices, as compared to backward reasoning of novices. In describing how psychologists make clinical judgements, Garb (1996) described the use of heuristics, which are defined as simple rules derived from experience used to simplify complex situations (Audi, 1999). Garb differentiated the representative heuristic where a judgement is made based on similarities between past experiences and the current situation (categorical judgements) from the past-behaviour heuristic where the current situation is judged on the past behaviours of the same client.

In nursing, Cioffi (2001) referred to heuristics as subjective probability judgements that simplify decision making, and may explain the apparent "intuitiveness" of the judgements. Cioffi (1997) described three heuristics; the "representativeness" heuristic, the "availability" heuristic, which refers to other similar instances that come to mind, based on ease of use, vividness of past examples, recentness of those example, and salience of the situations, and the "anchoring and adjustment" heuristic, which provides a norm for the interpretation of observations made in practice. The benefit of using heuristics is that the mode of reasoning is described as unstructured, non-analytic, probability-based, and non-deliberative, thus allowing for quick decision making in uncertain situations. The limitations of this approach are the same. The mode of reasoning is non-analytic, allowing for systemic bias or error in the judgements if the heuristic is not examined in light of other evidence, or if the experiential learning base is inadequate.

Although proponents argue the importance of a particular mode of clinical reasoning, clinical decision making likely involves both types of reasoning. Clinical reasoning can be represented on a continuum with humanist intuitive reasoning at one pole and hypothetico-deductive reasoning at the other, thereby reflecting Hammond's cognitive continuum theory (Thompson, 1999). Most practitioners use both types of reasoning. The nature of the decision making that nurses use is dependent on the nature and context of the task and the structure of knowledge (Lauri et al., 2001; Thompson). In an international study of nurses in five countries, Lauri et al. demonstrated that nurses in all locations of the study used predominately analytical thinking in information collection, problem definition, and planning of care, and intuitive thinking in planning, implementing, and evaluating outcomes of care. In general, Thompson indicated that analytical thinking will likely be used in the following situations; if the task is well defined and structured, evidence is objective and quantitative, guidelines are available, particular approaches are known to be accurate or effective, the task is unfamiliar, or sufficient time is available to consider the issue. Intuitive approaches are more likely to be used in unstructured and undefined situations with large numbers of undifferentiated cues, in short time frames, and in familiar situations especially where there is a high degree of ambiguity and little evidence to support practice. Schön (1983) referred to this reflection-in-action as the way in which experienced practitioners engage in thinking when presented with an undefined problem or issue.

Although intuitive decision making is characteristic of expert practice (Higgs & Jones, 2000b), little research has demonstrated the accuracy of those decisions. Panniers and Kellogg-Walker (1994) reported that for specific nursing tasks, there was a significant difference between nurses' intuitive decisions and those based on a decision analysis tool. They demonstrated that on certain nursing tasks, there was only a 35% level of agreement between intuitive qualitative decisions and the more prescriptive evidence-led decisions, thus raising questions about the validity of intuitive decisions (if one accepts the evidence as valid). Garb (1996) described a similar finding in relation to the judgement of clinical psychologists, where experts made clinical judgements that were no more accurate than those of new practitioners, but did so with greater efficiency, speed, and confidence in their decisions.

Knowing the patient. Through knowing the individual client as person, including individual patterns of responses and narratives of the illness experience, nurses construct practice knowledge that informs their future practice with other clients (Benner, Tanner, & Chesla, 1996b; Jenks, 1993). Nurses frequently make reference to "knowing the patient" in justifying some of their nursing actions, particularly in situations where propositional knowledge or scientific evidence is applied in a particular manner to the individual patient situation (Radwin, 1996). This knowledge of the patient evolves from a involved interaction with the person, where subtle changes are noted and understood in the context of the whole situation, an understanding that is directly apprehended and one that is difficult to communicate (Tanner et al., 1993). This knowledge is person specific, generalized from other persons in similar situations, and based on similar patterns of responses with other patients. It also involves knowledge of the person such that the expert nurse understands the meaning of events for the patient (Radwin), and initiates interventions based on anticipated client responses. This 'knowing the patient" provides the context for individualizing scientific or propositional knowledge, as well as determining probable courses of events and anticipating deviations from that course (Benner, Tanner, & Chesla). Knowing the person provides the context for moral commitments to action on behalf of the client, providing justification and necessity for advocacy and individualization of care.

Moral Commitment. Benner, Tanner, and Chesla (1996a) and Epstein and Hundert (2002) identified a moral aspect of clinical judgement, recognizing that health care practitioners come to the clinical relationship with both personal and professional commitments to the "moral good." This commitment is reflected in the decisions that nurses make to achieve the "best" for a client in their individual situations (Benner, Tanner, & Chesla, 1996b; Harbison, 2001). These commitments to do good are codified in professional statements of ethical and moral action (Canadian Nurses Association [CNA], 2002), but it is the enactment of professional values in practice that characterizes clinical judgement. Such a commitment to do what is right for a client often leads to the integration of practice or proximal knowledge (Clarke & Wilcockson, 2002) with scientific or distal knowledge, often resulting in modified application of scientific knowledge to the particular situation of the client.

Clinical judgement is a complex phenomenon that includes practice knowledge, clinical decision making, knowing the patient, and moral commitment to good for the patient. The previous review of the literature indicates its complexity in practice, and the difficulty one has in researching this concept. As important as clinical judgment is, the concept has remained elusive, and other than the work of Benner and her associates (Benner, 1984; Benner, Tanner, & Chesla, 1996b; Benner, Hooper-Kyriakidis, & Stannard, 1999), it has been inadequately researched (Tanner, 1993).

If competence is equated with performance of skills, researchers have been relatively successful in validly and reliably determining adequate performance, although correlation of performance with actual practice and competence in patient situations has not been well documented (Adams, 1999; Howell Adams, Whitlow, Stover, & Williams

Johnson, 1996; Tanner, 1993). If clinical judgement is viewed as a complex psychological construct involving ways of thinking, knowing the client, and moral decision making, researchers have been successful in determining the nature of clinical judgment in nursing (Benner, Tanner, & Chesla, 1996b; Tanner; Eraut, 1994), but far less successful in determining how to quantify clinical judgment, measure it in practice, or even to identify associated factors.

Correlates of Clinical Judgement

In an attempt to understand the complexity of clinical judgement, several researchers have attempted to correlate clinical judgment to associated variables such as critical thinking. Perhaps due to the nature of the assessment tool commonly used to measure critical thinking [Watson Glaser Critical Thinking Appraisal (Watson & Glaser, 1964)], or to the fact that clinical judgment and critical thinking are only loosely related, the correlations between critical thinking and clinical judgment have been minimal or non-existent (Bowles, 2000; May et al., 1999; Maynard, 1996). Research on clinical judgement in nursing has remained in the qualitative sphere, while quantitative studies that have been conducted have proved to be virtually useless in examining the process of clinical judgment in practice.

From this review of the literature, I have conceptualized *clinical decision making*, also called clinical reasoning, as a broad complex process that a nurse uses within a multi-dimensional context to reduce the uncertainty encountered in a specific client situation and to reach a particular conclusion. *Clinical judgement,* an essential skill of clinical competence, is thinking characterized by an increased understanding of the client situation. It is the ability to anticipate the likely course of events for typical clients, which is built on a foundation of clinical skills, scientific and practice knowledge, and moral development; incorporates skills of clinical decision making and critical thinking with practice knowledge. *Clinical knowledge* refers to practice knowledge that nurses gain through interactions with clients and other health care professionals in the provision of nursing care, and builds on domain-specific knowledge learned through formal study.

Evidence-Based Decision Making

Definitions of Evidence-Based Decision Making

One of the most intriguing aspects of clinical judgement is the thinking that underlines the process. Benner, Tanner, and Chesla (1996b) referred to rational technical thinking as a linear progression and suggested that it constitutes a portion of the clinical decision making that nurses use in practice. This aspect of clinical judgement accesses scientific thinking (Carper, 1978) or technical judgement (Downie et al., 2000) and is a critical aspect of knowledge utilization in practice (Estabrooks, 1998).

In medicine, evidence-based medicine was defined as "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research" (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996, p.71). This definition was later extended to include patient values: "Evidence-Based Medicine is the integration of best research evidence with clinical expertise and patient values" (Sackett, Straus, Scott Richardson, Rosenberg, & Haynes, 2000, p.1). In nursing, evidence-based practice involves using the best available current evidence. The evidence often arises from qualitative research or from practice itself, prompting Kitson (1997) to question whether nursing has a scientific basis for practice. The integration of scientific evidence with clinical judgement is important to practice, and can be measured through assessment of a practitioner's use of research or scientific knowledge in their practice decisions (DiCenso & Cullum, 1998; Estabrooks, 1998; 1999b; 1999c; 2001; Estabrooks, Floyd, Scott-Findlay, O'Leary, & Gushta, 2003; Kitson et al., 1998; Munhall, 1998; Stetler, 1985; 1994; 2001). Researchers have attempted to identify individual characteristics influencing knowledge and research utilization, organizational characteristics influencing practitioner use of research knowledge, and characteristics of the knowledge itself that affect its use. However, several authors have demonstrated that nurses do not use research knowledge extensively in practice, often preferring the advice of colleagues or reference to intuition to justify their decision making (Estabrooks, 1998; Thompson et al., 2001a).

The nature of evidence. Use of scientific knowledge is an important and expected aspect of nursing practice. Unfortunately, contrary to the positions of Benner, Tanner, and Chesla (1996b), Carper (1978), and White (1995), the Knowledge Utilization (KU) literature is premised on the assumption that valid knowledge is only generated within a research paradigm, specifically the quantitative paradigm. In this paradigm, Randomized Clinical Trials (RCT) constitute the "gold standard" of evidence for practice (Butcher, 1998; Jennings & Loan, 2001; Sackett et al., 1996; Upshur, 2000; 2001). Evidence generated through qualitative research is not included in the hierarchy of evidence (Butcher), and is generally disregarded or accorded very little value in evidence-based decision making (Madjar & Walton, 2001; Meadows & Morse, 2001; Ray & Mayan, 2001; Thorne, 2001; Thorne, Joachim, Paterson, & Canam, 2002; Upshur, 2001).

Knowledge generated through practice, described as clinical knowledge, is largely ignored or deemed invalid (Downie et al., 2000). In the evidence-based practice and knowledge utilization literature, clinical judgement, clinical knowledge, and practice expertise are considered unreliable sources of knowledge that should be used only to adapt more reliable evidence to the individual patient situation (Downie et al.; Jennings & Loan; Sackett et al.; Upshur, Vandenderkhof, & Goel, 2001). Although many practitioners have come to question an exclusive reliance on a hierarchy of scientific evidence (Butcher), they do acknowledge the benefits of scientific knowledge in practice. Part of a nurse's clinical judgement is the knowledge of when to rely on scientific evidence for decision making, and when to rely on other types of knowledge or ways of knowing. A question to be addressed in this study is the extent to which new practitioners use research knowledge to support their decision making in practice, especially since their practice knowledge is limited by their lack of experience. At what point do practitioners rely more heavily on their clinical judgement, and what factors in their own self-assessments give them confidence to do so?

Benner, Tanner, and Chesla (1996a) made the point that clinical judgement is much more than rational technical thinking or evidence-based practice, and that exclusive reliance on scientific evidence as a basis for practice negates the expertise of skilled nurses. In nursing, because the "gold standard" of RCT evidence is generally limited or not available, nurses use evidence derived from other paradigms, which include theoretical and clinical knowledge as evidence (Fawcett, Watson, Neuman, Hinton Walker, & Fitzpatrick, 2001). As Benner, Tanner, and Chesla indicated, new nurses have limited experiential knowledge, and thus, rely on propositional knowledge from previous educational experiences to guide practice, resulting in decision making that is conscious and deliberate, and more reliant on scientific knowledge. However, in situations where the organizational culture does not support evidence-based practice or knowledge utilization, one speculates on how extensively these new nurses use scientific knowledge (Kitson, Harvey, & McCormack, 1998). The question arises as to whether new nurses continue to integrate the best available evidence with clinical judgement, as they did in their education programs, and at what point do they rely more extensively on their developing judgement and clinical knowledge?

Critical Thinking

Conceptualizations of Critical Thinking

Critical thinking is a concept that is often presented as an alternative for clinical judgement in the nursing literature. Nursing's commitment to critical thinking as an important component of nurses' ways of thinking is evident in the literature and the standards of the profession (Canadian Association of Schools of Nursing [CASN], 2004; National League for Nursing [NLN], 1992; Videbeck, 1997a). Currently, critical thinking skills, strategies to teach critical thinking, and outcome measures of critical thinking are inadequately researched to demonstrate efficacy of various instructional practices (Giancarlo & P.A.Facione, 2001; Halpern, 2001). Critical thinking is a generic skill that is recognized as important in the practice of any practitioner including nurses and physicians, and is identified as a necessary attribute for autonomous practice in rapidly changing situations (Rapps, Riegel, & Glaser, 2001; Finn, 2001; Wade, 1999; MacDonald, 2002). For the most part, definitions of critical thinking and critical thinking skills are generic and have not been adapted to specific disciplinary practices (Giancarlo

& P.A.Facione). Thus, critical thinking is dependent on the domain-specific knowledge of the practitioner to adapt the skills to particular situations such as nursing.

Critical thinking is recognized as a complex phenomenon that is difficult to define. In essence, critical thinking is viewed as a cognitive process based in reflection (Adams, 1999; Daly, 1998; Jones & Brown, 1991; 1993; Kintgen-Andrews, 1991). Paul (1990) described critical thought as "disciplined, self-directed thinking which exemplifies the perfections of thinking appropriate to a particular mode or domain of thinking" (p. 33). Characteristics of critical thinking include clarity, precision, specificity, accuracy, relevance, consistency, logicalness, depth, completeness, significance, fairness, adequacy for purpose, and meta-cognition, the art of thinking about thinking (Paul). Brookfield (1991) described critical thinking as a process that involves defining problems, challenging assumptions, assessing context, and generating alternatives. He also acknowledged the emancipatory nature of critical thought, the need to resolve contradictions, and the role of reflection in the process that often results in clarification of meaning or a changed perspective. Watson and Glaser (1964), authors of the Watson-Glaser Critical Thinking Appraisal (WGCTA), described critical thinking as a composite of attitudes, knowledge, and skills, a predisposition to thoughtful consideration of issues, and knowledge of methods of inquiry and reasoning.

Critical thinking is acknowledged as both a cognitive ability and a philosophical belief that is evidenced in reflective thought, strongly emphasizing the affective commitment to the process (Brookfield, 1991; P.A. Facione, 1990; Paul, 1990; Scheffer & Rubenfeld, 2000). Recognizing the importance of critical thinking in education of all persons as well as its cross-disciplinary nature, P.A. Facione, with the sponsorship of the

American Philosophical Association, convened a panel of experts who defined critical thinking as "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criterologial, or contextual considerations upon which the judgment is based" (p. 3).

In the same study, P.A. Facione (1990) reported the American Philosophical Association consensus statement of the characteristics of the ideal critical thinker as:

> habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. (p. 3)

N.C. Facione, P.A. Facione, and Sanchez (1994) made the point that these critical thinking attributes are consistent with attributes of nurses who demonstrate expertise in clinical judgement, drawing a link between critical thinking and clinical judgment. Paul (1990) added intellectual humility (knowing one's limitations), intellectual empathy (understanding the other's perspective), and intellectual courage (willing to address ideas contradictory to one's own). In applying P.A. Facione's list of attributes to nursing, Scheffer and Rubenfeld (2000), using a panel of nursing experts, added the following to the list of attributes of critical thinkers: confident in one's decisions, creative, aware of contextual issues, intuitive, and reflective.

Kuhn (1999) connected stages in critical thinking development with Perry's (1970) levels of cognitive development. Kuhn stated that many college students, and presumably many nursing students, may be in a multiplistic stage in their cognitive development wherein all perspectives are equal. Thus, these learners may have difficulty with critical thinking in nursing. She suggested that some students are near graduation before developing cognitive thought to the evaluative stage where learners are able to critically analyze situations. The process of developing critical thinking is time consuming and may not occur in a single course, especially one near the end of the program (Giancarlo, & P.A.Facione, 2001; Rapps et al., 2001). If critical thinking were an important constituent of clinical judgment, this perspective would help explain why new nurses entering practice need time to develop their clinical judgment as they are also developing critical thinking at the same time. It also raises the question of the impact of context of practice on the development of critical thinking and clinical judgment because new nurses may be discouraged from using critical thinking to guide practice (Greenwood, Sullivan, Spence, & MacDonald, 2000).

Assessment tools. A variety of assessment tools have been used to measure critical thinking and clinical judgement (Adams, 1999; Bowles, 2000; Watson & Glaser, 1964). Unfortunately, most measures to date have proven to be inadequate measures of clinical judgement. Since measures of critical thinking such as the WGCTA correlate only minimally with measures of clinical judgement, it could be that although critical thinking and clinical judgement may be related, they are not the same (Howell Adams et al., 1996; Maynard, 1996; Rane-Szostak & Robertson, 1996). Most measures of clinical judgement in the studies that have demonstrated some correlation used nursing diagnosis or some other proxy for clinical judgment that may inadequately represent the concept in practice.

More recent measures of critical thinking, such as the California Critical Thinking Dispositions Inventory (CCTDI) and the California Critical Thinking Skills Assessment (CCTSA), have been developed to address the lack of relevance of various common measures of critical thinking to nursing (P.A. Facione, 1990; N.C. Facione & P.A. Facione, 1996; N.C. Facione, P.A. Facione, & Sanchez, 1994). Although assessments of critical thinking are more effective with these new tools (Leppa, 1997; Rapps et al., 2001), critical thinking as measured by these instruments does not seem to fully explain clinical judgement. Perhaps, as Benner, Tanner, and Chesla (1996b) suggested, clinical judgement incorporates the practice knowledge that cannot be addressed through assessment of critical thinking alone.

In summary, and for the purposes of conceptualizing critical thinking at the start of this study, critical thinking is a cognitive ability and a philosophical belief that is evidenced in reflective thought. It is the purposeful, self-directed self-regulatory thinking that results in interpretation, analysis, evaluation, inference, and explanation of the basis for one's decision making in practice.

Summary

In summary, clinical judgement is a critical element in the competence of a nurse and one that develops through practice over time. From the work of Benner, Tanner, and Chesla (1996b), it is clear that clinical judgement changes with practice experience, and new nurses enter practice with breadth but not depth of theoretical knowledge and limited experiential knowledge in the new practice setting. Over the first two years of practice, new nurses achieve the Competent level of practice (Benner, 1984) and develop clinical judgement that is conscious, deliberate, and characterized by increased clinical understanding and the ability to anticipate the likely course of events for typical clients. The competent practitioner undoubtedly uses critical thinking and evidence in practice, but it is uncertain how that use relates to the development of competence in clinical judgement. We know a considerable amount of information about competence, critical thinking, and knowledge utilization; however, we do not know how new practitioners achieve this level of competence in clinical judgement in practice.

The work of Benner and her colleagues has been seminal in describing the stages in a nurse's development of expertise in nursing practice. A thorough review of the literature and consideration of the nursing practice context in Canada necessitates inclusion of the work of Benner and colleagues. While avoiding use of Benner's framework as an organizing theoretical perspective for this research, I explored the process of attaining self-defined competence in professional practice in a practice context that overwhelming accepts Benner's model. I have tried nonetheless to avoid imposing Benner's model on the developing theory, and have remained open to the theory in the data. I recognize that understanding the process of development of one's competence in clinical judgement in professional practice is essential to our understanding of how to better support nurses engaged in this process.

CHAPTER 3

METHOD

Grounded Theory Method

I employed grounded theory method as the most appropriate way of exploring a social process such as the development of clinical judgement in practice. Grounded theory is a research method that is used to discover theory from data derived systematically from social research (Glaser & Strauss, 1967). I have employed the processes of grounded theory as proposed by Glaser and Strauss (1967) and elaborated on by Glaser (1978; 1992) and other authors (Stern, 1980; Schreiber & Stern, 2001; Charmaz, 2000; Morse, 2001a; Hutchinson & Wilson, 2001). Grounded theory is based on the premise that systematic collection and analysis of data will result in the generation of grounded theory that is most suited to its supposed purpose (Glaser & Strauss). In my study, the generation of theory grounded in the experiences of new nurses illuminated the process that they experienced in developing their clinical judgement over the first two years of nursing practice.

Symbolic Interactionism

Grounded theory is based on the understanding of symbolic interactionism (SI), whereby individuals make meaning of their social realities (Glaser & Strauss, 1967). SI, not exclusive to grounded theory, derives from social psychology and reflects the social nature of one's perspective and experience (Benzies & Allen, 2001). From the SI perspective, human beings are active participants who create the world in which they exist, rather than merely responding to social and structural conditions of that world (MacDonald, 2001). Individuals structure their external worlds by their perspectives and interpretations of their own situations, and base their behaviour on this interpretation (Benzies & Allen). Grounded theory as posited by Glaser and Straus, and subsequently by Straus and Corbin (1994;1998), incorporated SI but assumed an objective reality for participants that could be elucidated through objective analysis of the data. In contrast but continuing to use SI as an underlying premise of grounded theory research, researchers may employ a more constructivist approach to interpretation of their data to determine the meaning of the social context of participants' behaviour (Charmaz, 2000).

Milliken and Schreiber (2001) described grounded theory method as an integration of the logic and rigor of quantitative methods with the interpretive insights of symbolic interactionism, as evident in mediated symbolic communication. While recognizing the necessity of the systematic data collection and analysis of quantitative methods and the generation of theory grounded in that data, grounded theory method also acknowledges the individual's perspectives, interpretations, and construction of meaning within that individual's context. Individuals create and modify their understandings and meanings through their own actions and interactions with others. Shared meanings constitute the culture in which individuals function and provide some degree of predictability in the behaviour of individuals within a specific group. Thus, to fully understand a social situation, it is necessary to assess both overt and covert behaviours and their associated meanings to obtain fuller understanding of that social situation. Milliken and Schreiber asserted that grounded theory method is intrinsically linked to symbolic interactionism, and thus SI cannot be separated from the method, laying the philosophical groundwork for a more interpretive approach to grounded theory.

To some, symbolic interactionism fails to adequately acknowledge the impact of the structural aspects of interactions since the researcher's focus on individual perspectives and behaviours may result in failing to explore some relevant indicators or aspects of social institutions or power relationships (MacDonald, 2001). Because of this perspective, Charmaz (2000) suggested that constructivism or constructivist grounded theory may be a more appropriate representation of the process of grounded theory. In constructivism, there is an assumption of multiple social realities, mutual creation of knowledge by the individuals involved, and an aim toward interpretive understanding of participant perspectives and meanings (Charmaz). With a commitment to constructivism and multiple realities, and an acknowledgement of the philosophical underpinnings of grounded theory, I devised a theory grounded in the data that explains new nurses' experiences in their attainment of competence in clinical judgement.

Ethical Approval

This study was approved by the Health Research Ethics Board of the University of Alberta (Appendix A). Because I chose to expand the selection criteria to include new nurses who were employed on general pediatric, obstetric, and psychiatric as well as medical and surgical nursing units, I submitted a letter to the Health Research Ethics Board informing them of my desire to expand selection criteria. Permission to do so was granted by the Board. As well, I submitted the study proposal and ethical approval document to the Alberta Association of Registered Nurses and the Saskatchewan Registered Nurses' Association for review prior to their agreement to facilitate mailings to their members. Through the professional associations, I hoped to access a diverse participant sample and avoid involving employing agencies in the research in any way.

Thus nurses' participation in this study would not place them in jeopardy with their employers.

I have conducted this research in a specific manner to protect the confidentiality of the data provided by participants. My transcriber signed a confidentiality agreement prior to initiation of the transcription process. All tapes have been stored securely. Participant names have been removed from transcripts and replaced with their code names. Transcripts have been stored securely and raw data has not been and will not be made available to anyone other than my research supervisor. All data provided to me have been reported in aggregate form or under the code names that participants selected for themselves. Any identifying information in the quotations used in reports, manuscripts, and presentations has been replaced with generic terms (i.e. "general hospital" to replace the specific agency name) to avoid undue risk to the confidentiality of the data particpants have provided.

Setting

The setting for this study was within acute care hospitals of the Canadian health care system in Alberta and Saskatchewan in late 2003 and 2004, the period during which data were collected. The more relevant contextual period of time for these participants is however the point at which they entered practice, which was 2001 for the majority of these participants. At that time, the healthcare reforms of the 1990s had affected the practice context, with the following effects: increased casualization of the nursing workforce; increased acuity of the acute care client populations; a growing percentage of young nurses leaving nursing or the Canadian nursing workforce; a supply of nurses that had not kept pace with growth in the population; more nurses working for multiple employers; a decline in the number of nurses employed in nursing; and an aging workforce (Canadian Institute for Health Information [CIHI], 2002; Office of Nursing Policy, 2005). In 2001, Canada had more Registered Nurses in the 55-59 age group than in the 25-29 age group, with the average age of nurses being 43.7 years, an increase of 1.3 years over the previous five years (CIHI, 2002). The average age of nurses was 44.1 years and 43.9 years for Saskatchewan and Alberta respectively (CIHI).

The percentage of nurses entering practice with basic baccalaureate preparation was 12.5%, with 24.3% of the total nursing population attaining baccalaureate preparation during their careers. During the previous five years, the percentage of Registered Nurses employed on a casual basis declined to 12.8%, with more nurses working in full-time and part-time employment, 54.1% and 45.9% respectively (CIHI, 2002). In 2001, nurses were still migrating to other provinces to obtain full-time employment (CIHI), with 18.3% of Saskatchewan 2001 nursing graduates moving to Alberta or British Columbia (NEPS, 2003). Although the nursing practice context had been improving over the previous five years [1997-2001] (CIHI), there were still nursing workforce issues affecting these participants.

I did not place any restrictions on the size of the hospital or its situation in urban or rural settings. I initially had sought only participants who were employed on medical or surgical units. Through inclusion of a participant who started employment on a surgical unit but moved to an obstetrical unit early in her practice, I found that similar processes occurred for new nurses on pediatric, obstetrical, and psychiatric facilities. I obtained permission from the Health Research Ethics Review Board of University of Alberta to expand the selection criteria to include new nurses on any general nursing unit in an acute care hospital. The inclusion of both urban and rural hospital settings in two Canadian provinces provided for diversity in the practice setting, including different levels of patient acuity, the presence of observational and intensive care units in larger hospitals, and associated medical expertise. I purposefully sought diversity in the sample and used theoretical sampling to obtain participants with diverse perspectives and contexts.

Some of these acute care nursing units were within health districts that provided a large number of services for new graduate nurses to facilitate their integration into the work setting and to provide support for them to develop their professional skills. Other settings were smaller rural facilities, in which the new graduate was the only nurse in the facility at a specific time, particularly on night shifts. In smaller facilities, practice supports such as clinical nurse educators and locally-provided continuing education programs were generally not available to new nurses.

Participant Sample

Two terms, *purposive sampling* and *theoretical sampling*, are used to describe the recruitment of participants to grounded theory studies. Purposive sampling involves recruiting those individuals who have experience with the phenomenon of interest and can inform the study, according to specific criteria for inclusion and their representativeness of the specific population (Gillis & Jackson, 2002; Nieswiadomy, 1998). Glaser and Strauss (1967) and Glaser (1978) used the term *theoretical sampling* to include this purposeful selection of participants, indicating that early theoretical sampling is based on the researcher's general understandings of the phenomenon (Cresswell, 1998; Nieswiadomy), or as Glaser described it, "the general sociological perspective about a substantive area within a population" (p. 36). Schreiber (2001) used the term *sensitizing concepts* to describe this pre-existing knowledge of the phenomenon. As data collection and data analysis progress, theoretical sampling is used to recruit participants who could contribute particular perspectives to the developing theory, "*controlled* by the emerging theory, whether substantive or formal" (Glaser, p.36). Theoretical sampling is guided by the researcher's *theoretical sensitivity* that develops through engagement in concurrent data collection and data analysis and through abstraction of the data to the concepts and hypotheses of the emerging theory (Gillis & Jackson, 2002; Glaser; Glaser & Strauss; Nieswiadomy; Schreiber).

I have used the term *purposive sampling* in my study to identify those nurses who were first approached to participate, based on specific selection criteria; 1) baccalaureate nursing preparation, 2) registration as a nurse in Alberta or Saskatchewan, and 3) fulltime employment in clinical nursing practice for between two and three years on nursing units in acute care hospitals in Saskatchewan and Alberta. For the most part, I was seeking baccalaureate nursing graduates from the year 2001. There was a large pool of possible participants since most new graduates in their first employment positions are employed on general nursing units in acute facilities. Approximately 500 new graduates are registered in Alberta per year and 200 in Saskatchewan. Only baccalaureate-prepared nurses were included in this sample although Alberta graduates both baccalaureate and diploma nurses. Most of these new nurse participants were graduates of the university nursing programs in their respective provinces. Although not all these graduates remained in their initial registering jurisdiction, the pool from which I recruited my participants was large and allowed for initial purposive sampling as well as theoretical sampling further into the study. However, because of the recruitment process I used, I did have two participants who were employed in Alberta but had been educated at the baccalaureate level in other Canadian provinces.

I wanted to recruit new nurses who had practiced on the same nursing units, or with the same client groups for their full employment period, specifically for two or more years. Nurses with a minimum of two years to a maximum of three years of full-time practice would have had sufficient opportunity to develop their clinical judgement to the Competent Level, as defined by Benner and her colleagues (Benner, 1984; Benner, Tanner, & Chesla, 1996a). After approximately two years of practice, they would be able to reflect on the process that they went through in order to attain a competent level of practice and clinical judgement. Although I was able to recruit new nurses with at least two years of practice experience, most had not worked for the required two years in the same nursing unit. This situation was a reflection of the work place, at times reflecting nursing unit reorganization, work re-assignments, or negative work environments. A number of new nurses had moved to new nursing employers in different cities for family reasons. Only approximately 25% of these new nurses had worked in the same work place for their whole nursing careers. I then elected to interview nurses with two years of professional nursing practice in the same or similar practice areas, to provide sufficient participants for this study.

Sample size is an ongoing question in qualitative research, as it was in this grounded theory study. Morse (2000) suggested that the size of the sample needed to provide rich data for qualitative studies depends on the scope of the study, nature of the study, quality of data, study design, and use of shadow data (defined as reporting on the experiences of others). Based on these criteria, in May 2003, I proposed to recruit approximately 20 participants to the study, anticipating ten from each province. I had anticipated that I would continue recruiting participants until such time as the categories in the developing theory were saturated and no new perspectives were added by new participants, thus making my final sample size unpredictable. I had anticipated that through theoretical sampling, I would gain additional participants who could speak to specific aspects of the developing theory. I continued to seek diversity in those who participated, recognizing that the theory generated in this study should explain the development of clinical competence by entry-level nurses in many different settings. For all these reasons, my sample size was ultimately 25 participants, a sample size considered acceptable in grounded theory studies (Cresswell, 1998; Gillis & Jackson, 2002; Malterud, 2001; Polit & Hungler, 1999).

Theoretical Sampling

Theoretical sampling is an integrated process of generating theory and collecting data concurrently where the evolving theory directs data collection. The researcher codes, categorizes, analyzes data, and constructs theory while continuing to collect data from selected participants who can provide new insights and observations that contribute to the developing theory (Glaser, 1978; Glaser & Strauss, 1967; Polit & Hungler, 1999; Schreiber, 2001; Strauss & Corbin, 1998). The process is one of comparisons between the developing concepts that constitute the emerging theory and data provided by participants. This process can be described as a recursive one (Polit & Hungler) or a "zig-zag process" (Cresswell, 1998) of systematically collecting and analyzing data, including that data previously collected and analyzed, with the ultimate goal of identifying, expanding, and relating concepts for theory development (Strauss & Corbin).

In theoretical sampling, the number of and the nature of participants selected for interviews is dependent on the developing theory and the saturation of the categories contributing to that theory (Cresswell, 1998; Glaser, 1978; Glaser & Strauss, 1967; Polit & Hungler, 1999; Schreiber, 2001; Strauss & Corbin, 1998). I estimated this number at 20 participants at the start of the study, acknowledging that in grounded theory, sampling evolves as the study progresses (Strauss & Corbin). For initial data collection, I selected participants through purposive sampling to provide exploratory data about the process of developing clinical judgement in nursing practice Based on the developing concepts and hypotheses concerning the relationships among them (the emerging theory), I became more theoretically sensitive and explored those categories and concepts that needed more depth in their properties, dimensions, and relationships (Schreiber), also referred to as theoretical sampling (Glaser; Strauss & Corbin). I subsequently used theoretical sampling to recruit participants with particular experiences or characteristics. I also consulted the literature as data to address issues that were arising in the analysis, and thus informed my interviewing, data collection, and data analysis through the literature. My reference to the literature, which constituted another source of data for this grounded theory study, heightened my theoretical sensitivity to relationships between concepts in the emergent theory (Glaser; Glaser & Strauss; Cresswell; Malterud, 2001; Strauss & Corbin; Schreiber). My participant selection, interviewing, and data collection were subsequently more specific to the emerging concepts in the data and the relationships among these concepts as a result of both data collection and reference to the relevant literature.

I referred to the literature frequently throughout this study, using key bodies of literature to inform the developing theory and subsequent data collection. Because transition into professional practice was a significant category that emerged early in the process of interviewing and coding, I referred to the "Transition" literature (for example, Beeman et al., 1999; Delaney, 2003; Boychuk Duchscher, 2001; Casey et al., 2004; Ellerton & Gregor, 2003; Jasper, 1996; Kelly, 1996; Oermann, 1997). I was also directed to the literature on experiential learning by the data that I collected early in the data collection process (for example, Kolb, 1984; MacLeod, 1996; Schein, 1974; Schön, 1983). I interviewed seven participants, and coded their transcribed interviews, before it became apparent that social networks in work environments were a major issue for participants and a significant part of the developing theory, prompting my use of literature related to the social network of practice (for example, Argote, 2000; Greenwood, et al., 2000; Martin, 2002; Schein, 1993; Wenger, 1998). Up to the seventh interview, participants had been generally positive in their descriptions of the work environment and the support of their more experienced colleagues. In the seventh interview, Elizabeth described the hurtful comments and actions of a small number of senior nurses, indicating that the situation had resulted in formal reprimands for these senior nurses. At this point in the data collection and analysis, I determined that I would seek those participants who worked in more divergent work settings, specifically those that were highly critical and negative to new nurses, and those working in some isolation, specifically in small rural settings. I sought participants who met these specific criteria and was able to interview several, thus confirming the importance of the social network for developing clinical judgement.

As categories became saturated, however, or as concepts emerged in the developing theory, I used theoretical sampling to recruit participants who could speak to the issues raised by earlier participants in the study or to address issues that emerged from data analysis and formed the developing theory. For theoretical sampling, I wanted to interview participants who were articulate and could add their perspectives on the categories and their properties, and on the developing theory. As categories became saturated, I did not continue to ask the same preliminary interview questions relative to the saturated categories although the topics addressed by those questions were significant and data relative to those concepts did tend to be provided without prompting questions. I also selected volunteer participants who could add new perspectives to the data contributed by other participants or sought new participants through snowball sampling, asking participants if they knew of another new nurse who met specific criteria. If so, I asked them to invite the person to phone me, leaving contact information for me. I recruited eight participants through theoretical sampling, using participant connections or snowball sampling (Nieswiadomy, 1998), and employed theoretical sampling in many of the other interviews to direct questioning to issues relevant to the developing categories (concepts) in the evolving theory. This process added the diversity in participants and data collection that I needed for theory development and allowed me to explore concepts in the developing theory more effectively.

As the developing theory was taking form and I had referred to the relevant literature, I became more theoretically sensitive as the study progressed. Subsequent interviews focused on categories and concepts identified by earlier participants. Analysis of data from earlier interviews had also identified possible categories that needed further exploration. Thus, my theoretical sensitivity was combined with theoretical sampling to heighten my awareness and sensitivity as an interviewer. I also found that data analysis involved constant comparison of data collected from participants (Hutchinson & Wilson, 2001), including re-analysis of early data as the theory development proceeded and new issues emerged that had not been coded in the earlier analysis. The processes of data collection, data analysis, and theory development were intertwined and proceeded in an iterative but cyclical manner.

The only aspect of theoretical sampling that I could not achieve was the incorporation of the perspectives of new nurses who had left nursing within the first two years of practice. Although several participants alluded to new nurses who had left nursing due to hostile work environments or lack of support in their professional roles, no one was able to provide the name of such a person. In most instances, they had "heard" about such situations but were not personally involved with the person. A two year follow-up study of the 2001 graduates of the Nursing Education Program of Saskatchewan (NEPS) (Nursing Education Program of Saskatchewan, 2003) did not identify any graduates who had left nursing (response rate 72.2%). I did include several participants who had moved to new work places for a variety of reasons including negative work environments, and used those individuals to assess the impact of a negative work culture.

Procedures

Recruitment Process

Following ethical approval, I used a purposive sampling strategy to recruit initial participants to the study. Because I wanted to avoid jeopardy to any potential participant and reduce any perception of coercion to participate, I recruited participants through their professional organizations rather than through their employers. Unless participants chose to discuss the study with their employers, which several did, nursing unit managers should be unaware of their employees' decisions to participate in a study that explored their competence in clinical judgement and nursing practice. As a result, these participants were not at risk for any information they provided in the course of data collection.

Both the AARN and the SRNA maintain extensive databases of nurses registered in their jurisdictions. Although these associations do not make their databases available to researchers, they contracted (for a fee) to conduct searches of their database and to mail research information to association members who met my recruitment criteria and who had agreed to third party mailings. By using provincial databases to recruit participants, I accessed participants from different health districts, including nurses working in both urban and rural facilities. By accessing nurses through their provincial nursing associations rather than their employing agencies, I was better able to ensure confidentiality of participants and avoid the necessity of seeking ethical approval from every health district employing one of the participants.

The SRNA and the AARN conducted searches of their respective databases and each selected 50 participants who met the selection criteria. Letters of invitation

(Appendix A) were mailed by both associations to 50 prospective participants in their respective provinces in July and early August 2003. Five participants responded to these letters in Saskatchewan and four in Alberta. A second mailing in late September 2003 to 50 additional potential participants in each province netted an additional eight volunteers. Volunteers were interviewed to determine their suitability for the research and their specific work situations, to facilitate theoretical sampling. The remaining eight participants were recruited through snowball sampling, on the recommendation of participants who had already been interviewed.

Ethical Considerations

After I had determined the suitability of volunteers and prior to data collection, I provided participants with an information letter (Appendix C) and answered their questions concerning the study and my expectations of them as participants. I described my obligations to them as participants. Following our discussion, I asked participants to read and sign the consent form (Appendix D) and provided each participant with a copy of the signed consent form. The reading level of the information letter was assessed at 10.7, using the Flesch-Kincaid grade level, which should be an appropriate level for university graduates. I also asked participants to choose code names to identify their data.

Beyond the formal process of consent required by the Health Research Ethics Board, I assured all participants that I would maintain their confidentiality, and that results of the study would be reported only in aggregate form such that individual participants would not be identifiable. I treated all participants with respect for their dignity. I involved participants in reviewing my summary and interpretation of their first interviews, and sought verification that I had interpreted their comments as they had intended them. I also involved participants in validity checks of the emerging theory in terms of the stages of development at the third data collection point. I assured participants that they had the right to withdraw from the study at any time and to have their data removed from the analysis. However, because constant comparative analysis was used in grounded theory, I also informed participants that, at their request, the data itself would be removed from the study, but its effect on current or subsequent theory generation was difficult to isolate, and thus could not be removed. I assured them however that their transcripts would not be used for quotations to illustrate the developing theory. No participants withdrew from the study, limited use of their comments, or requested that their data be removed from the study.

My intent was to present their experiences and the meaning that they attributed to those experiences with consideration for accurate representation of their perspectives. Although the theory that I generated from these interviews did not present all participants' experiences in totality, my intent was to ensure that their experiences were adequately explained by the theory. To this end, I used member checks with all participants to ensure that I had been open to their words and had clarified those meanings and explanations that had any degree of vagueness in how I conceptualized their experiences.

Data Collection and Data Analysis

I used a Glaserian approach to grounded theory methodology, using strategies for data collection and analysis that were consistent with this approach (Glaser & Strauss, 1967; Glaser, 1978). Although I have done considerable reading into various aspects of clinical judgement, critical thinking, competence, evidence-based practice, and clinical decision making, I have tried not to use a pre-existing theoretical orientation to guide my data collection. Instead, I have tried to explore the phenomenon from the perspective of participants and to hear the voices of participants so that their perspectives were pre-eminent. I did become theoretically sensitized to particular issues through coding as categories developed, particularly as I referred to the literature as another source of data in this process. I attempted to remain open to the data and through this process, to develop concepts and the relationship among them and to theorize the process of developing clinical judgement in nursing practice, from the perspective of these new nurses. Acknowledging that I have experience with the phenomenon of interest and had referred to the literature extensively as categories became apparent, I was sensitized to these concepts and had read about or sought literature to expand my understanding of the theory emerging from the data.

Prior to the initiation of data collection, I pre-tested the interview guide (Appendix E) with a new pediatric nurse who had been in practice for nine months and did not meet the criteria for inclusion in the study. Because I am an experienced researcher, I critiqued my interviewing technique by reviewing the audiotaped interview and determining the appropriateness of my questions and my responses to the nurse's comments. I also determined the effectiveness of the general interview questions to prompt reflection on and discussion of the development of clinical judgement in clinical practice. I determined that both the interview questions and my interviewing techniques were appropriate.

I asked nurses who had volunteered for the study to contact me at a designated phone number or by e-mail. All potential participants were queried about their educational preparation, current employment status, and employment history to determine if they met eligibility criteria. I made appointments to interview those who were eligible at their homes, my office, or a quiet place convenient to them. Interviews were conducted in both Alberta and Saskatchewan.

I began data collection with the first participant in August 2003 and continued until December 2004 (16 months). For the first few interviews, I used the general questions to guide the interviews by general questions on the interview guide to explore the first two years of clinical practice of new nurses. I anticipated, and was correct in the assumption, that nurses would be able to provide rich data related to their own development but that several interviews might be necessary to fully explore the issues that they raised and to explore their data in light of coding into categories and the developing theory. This in fact was the case for approximately half of the participants whom I had interviewed twice, possibly because the first interview did not fully address certain issues or because the participants were excellent informants who were very reflective and articulate in their comments. I particularly wanted those individuals to respond to the developing conceptualization and theory, and found their responses to be very insightful and enhanced theory development. I remained open to the meanings that participants ascribed to their own experiences and was flexible during the interview in order to respond to the issues that they had raised.

Data were generated during audiotaped interviews (Fontana & Frey, 1994) using a guide to collect demographic data (Morse, 2001b; Morse & Richards, 2002) and general questions to guide interviews. Most initial interviews were face-to-face but I had also obtained equipment to audiotape telephone interviews as well (Shuy, 2003). Five participants, particularly those at a distance, preferred to conduct their first interviews by telephone and I accommodated those requests. Two participants had moved to other provinces shortly after having been contacted concerning participation by their professional associations, two had small babies, and one requested a phone interview for her convenience. I knew four of these five participants from their student experiences and felt comfortable interviewing them by telephone. They were forthright in their interviews, answered questions fully without prompting, and addressed issues openly, thus providing very useful data seemingly unaffected by the use of telephone. I did not feel that these participants were constrained in their participation due to the telephone interview or that they had a response bias because I had known them as students. Their data were rich, elaborative, and similar in nature to that provided by other participants

Most of the second interviews were also conducted by telephone. A limitation of this approach was loss of non-verbal cues that imbibe face-to-face interviews, the naturalness of face-to-face interactions that can lead to open expression and comfort in the interaction, and the length of the interviews (Shuy). I do not believe these limitations have affected either data collection or theory development. First and second interviews were extensive, lasting from 60 to 120 minutes, with the average interview about 90 minutes. Participants were very willing to discuss their own professional progress, with many indicating that my interviews were the first time they had been asked about their professional development in any depth. Participants were very frank about their progress, often identifying situations in which they felt incompetent or questioned their own development.

All interviews were audiotaped and transcribed by the same transcriptionist. Once I had received the transcripts (which in some instances was up to two weeks following the interview), I cleaned them and cross-checked the tapes and transcripts for accuracy, adding emphasis, pauses, and gestures from field notes to the transcripts. I ensured that identifying information was deleted and replaced with generic terms to represent that information. Transcripts were identified with the code name of the participant only. I used a data management system, *N6* (Morse & Richards, 2002), in order to facilitate effective analysis of a large amount of data. The use of this data management system allowed me to code data into categories, identify relationships among categories, maintain theoretical and operational memos, and model relationships among categories. With the assistance of this data management system, I was able to theorize the process that the participants described in developing competence in clinical judgement. However, I recognized that I needed to remain "close to the data" (Glaser & Strausss, 1967) to most effectively theorize while keeping that theory grounded in the data; thus, the original transcripts remained a critical basis for analysis and I indicated codes on these paper copies as well.

Data collection and data analysis quickly were an integrated process where ongoing data coding, category development, and data analysis guided subsequent data collection. I began the process of open coding and data analysis as soon as the first transcript was transcribed and cleaned. Coding was a conceptual process of abstracting and conceptualizing commonalities in the data. Data analysis involved coding the information and then using constant comparative analysis of the data collected at subsequent interviews to develop the categories, explore their properties, and relate them within the developing theory (Glaser, 1978; Glaser & Strauss, 1967; Hutchinson & Wilson, 2001; Morse, 1997).

Constant comparative analysis is a key component of grounded theory methodology and is critically important to ensuring that the theory generated by the study is grounded in the data, incorporates diverse perspectives, and has explanatory abilities (Charmaz, 2003; Gillis & Jackson, 2002; Glaser, 1978; Glaser & Strauss, 1967; Schreiber, 2001; Strauss & Corbin, 1998). Glaser and Strauss elaborated on comparative analysis, emphasizing the importance of using an explicit and systematic coding and analytical procedure, and documenting that process through the use of theoretical memos. Because comparative analysis begins with the first transcript analysis, and continues until the development of a parsimonious theory that explains the phenomenon of interest, it is an iterative process that results in "many hypotheses synthesized at different levels of generality" (Glaser & Strauss, p. 103). The challenge for a researcher is to remain theoretically sensitive to the data to test the developing categories, their dimensions and properties, and emerging hypotheses in subsequent data collection and analysis.

Glaser and Strauss (1967) identified four stages in this process of constant comparative method; 1) comparing incidents applicable to each category, 2) integrating categories and their properties, 3) delimiting the theory, and 4) writing the theory (p. 105). Strauss and Corbin (1990; 1998) elaborated upon, and formalized this process of comparative analysis. Open coding begins as soon as possible after data collection, with coding of incidents to categories and elaboration of properties and dimensions of categories through constant comparison of incidents within categories. Codes reflect researcher-generated naming and "in-vivo" naming using participant words. This process facilitated description of categories to elucidate their structure, temporality, cause, context, dimensions, consequences, properties and relationships with other categories (Hutchinson & Wilson). Coding is conducted at several levels: open coding to develop substantive categories, properties and dimensions; selective coding for the core variable; and theoretical coding of the relationships among concepts to develop the theory (Glaser, 1978). Analysis continues through comparison of incidents to one another, the higher level of abstraction of comparing incidents to the properties and dimensions of categories, and ultimately comparing categories, their properties and dimensions, to identify and hypothesize about relationships among them. Constant comparative analysis moves the researcher to greater levels of abstraction, incorporates diversity, and facilitates theory development (Schreiber, 2001).

In order to facilitate the process of constant comparative analysis, I initially re-read transcribed coded interviews or listened to the taped interviews prior to subsequent interviews. This process however quickly became cumbersome and impossible, and I reverted to the use of my existing categories and theoretical memos to alert me to key issues from earlier interviews or from the developing theory. Although this process was still time-consuming, it was much more manageable. The developing theory guided subsequent interviews and my questions were based on the theory that I was constructing as the study progressed. I continued open coding through many of the interviews to ensure that categories were fully developed, that their properties and dimensions fully explored, and the relationships among them carefully examined. I continued open coding throughout much of the study, in part to ensure that I had examined the data thoroughly and to be sensitive to new issues emerging in the data or the developing theory. I reviewed early transcripts and re-coded them in response to the emerging theory, an approach that Glaser and Strauss suggested was unnecessary. In hypothesizing relationships among these categories, which occurred relatively early in the study and continued throughout, I constantly was examining properties and dimensions of categories, and the incidents categorized within them, to determine relationships among them or test hypotheses for their relevance and fit to the situation. I used memos, both manually-generated and incorporated within the *N6* program, to record my thoughts. These theoretical memos developed over time and became the basis for theory development.

Through theoretical sampling, I sought additional participants to facilitate saturation of the categories, their properties and relationships, and the development of the theory. I determined that saturation of the categories had occurred when categories were fully explicated and no new data was emerging from subsequent interviews (Straus & Corbin, 1998) or "theoretical redundancy" had occurred (Charmaz, 2000). Saturation had been reached when the categories, their properties, dimensions, contextual factors, conditions, consequences, and hypothesized relationships between categories were virtually unchanged as a result of coding (Glaser & Strauss, 1967; Strauss & Corbin), and coding was only confirming previously collected data (Gillis & Jackson, 2002). Categories were saturated at different points throughout the study, thus providing direction for theoretical sampling and data collection to ensure saturation of the remaining incomplete categories (Glaser & Strauss). Saturation of categories was important to achieve in order to ensure full and complete description of the phenomenon and give basis for confidence in the subsequent theory development (Glaser & Strauss, 1967; Gillis & Jackson). I was conservative in my determination of saturation because of my experience with Charmaz' work that illustrated that continuing data collection beyond "apparent" saturation can facilitate the emergence of new data. In the words of Wilson and Hutchinson (1996), I wanted to avoid "premature closure" and ensure category saturation as I developed the theory from the identified and explicated categories (Schreiber, 2001). Strauss and Corbin supported this approach, indicating that the identification of category saturation is a somewhat subjective process of determining when coding to the category does not add to the category's development or the emerging theory. At a certain point, the researcher must determine to move to a higher level of abstraction. The point of saturation may be difficult to determine but, as Glaser and Strauss indicated, "…the researcher becomes empirically confident that the category is saturated" (p. 61). As the theory developed, I began to selectively code data to specific categories and their properties, and to identify the core variable in the process of developing clinical judgement in nursing practice.

As a means of member checking, and with the intent to stimulate additional reflection on particular issues, especially as selective coding and theoretical sampling progressed, I prepared two page summaries of each participant's first interview. I gave these summaries to participants, asking them to check them for accuracy, and where inaccuracies existed, to correct my understanding of their data. This process often involved clarification or elaboration and was useful in prompting elaboration on certain concepts and assisting me to explore categories and their properties more fully. I had also anticipated that if participants had journaled through their first two years of nursing practice, I would ask them to review their journals to refresh their memories of issues in the experience, and if they were willing, to provide a copy of the journal for the study. Because none of these participants kept journals of their experiences, this type of documentation was not available for my study.

A third point of data collection consisted of sending each participant an overview of the Process of Developing Clinical Judgement in Practice, including the five stages of; *Orientating to the practice environment, Learning practice norms, Developing confidence, Consolidating relationships*, and *Seeking challenge*. Although I had considered sending the Theory of Developing Clinical Judgement in Practice to participants, Glaser (1978) cautioned that participants may have difficulty theorizing their own experiences. I did however send a version of the Process of Developing Clinical Judgement in Nursing Practice (pp. 251-267), which I felt was more concrete and more easily applied to their personal situations. I invited participants to reply to an email or (where the participant did not have email) a letter with their comments concerning the process detailing the development of clinical judgement in their practice. Seven responded by email indicating their agreement, two forwarded comments by letter, and four responded by phone call. All who responded were supportive of the process as I had theorized it, including the two participants who were negative cases in this data collection process.

Data Analysis and Theory Generation

Although data collection and data analysis proceeded in an integrated manner, I need to explain the analysis process in greater detail. The intent of data analysis was to explore the data, explicate the concepts embedded in the data, and theorize the process of new nurses' acquisition of clinical judgement for clinical competence in nursing practice (Hutchinson & Wilson, 2001; Glaser, 1978; Glaser & Strauss, 1967). In conceptualizing the process in which new nurses engage in developing their clinical judgement, I focused on identifying the core variable in this developmental process, and how it integrates concepts that were evident in the data. Glaser stressed the importance of fit between the core variable and the data to ensure that the identified category accounts for variability in the data. Core variables can be identified in the data analysis through the application of specific criteria (Glaser, 1978); 1) the variable is central and related to most of the other categories and their properties, 2) it recurs frequently in the data, 3) it generally takes more time to saturate due to its central nature, 4) it relates meaningfully with other categories, 5) it permeates the theory, and 6) it accounts for variation in the phenomenon (pp. 95-96). This core variable may be, but is not necessarily a basic social process characterized by two or more stages accounting for variability over time (Glaser). In this study, I determined that the core variable was a basic social process, *Seeking learning*, which was evident in and permeated this data and formed the basis for the substantive theory.

Useful theory is dependent on careful and thorough analysis of dense data to identify concepts and the hypothetical relationships between these concepts. I have up to 240 minutes of transcribed interview data with some participants and at least 90 minutes of interview data with the rest. Data were rich and dense, and participants were open and frank in their discussions of their progress as new nurses in practice, including those contacted by telephone. I sought diversity among my participants and through theoretical sampling, attempted to recruit participants who could address issues in the developing theory (Glaser, 1978; Strauss & Corbin, 1998).

I analyzed the interview data for conceptual ideas as soon as the audiotapes had been transcribed (Huberman & Miles, 1994; Silverman, 1993), identifying the issues evident in the transcripts using "in vivo" codes where appropriate (Glaser, 1978; Glaser & Strauss, 1967; Glaser, 2002; MacDonald, 2001). Glaser identified two types of codes. Substantive codes deal with the empirical substance of the study and theoretical codes are used to conceptualize how the substantive codes relate to one another. My coding was guided by the general questions: 1) What is this a study about? ; 2) What property of what category does this incident indicate?; and lastly, 3) What is actually happening in the data? (Glaser, 1978, pp.57).

I used a Glaserian approach to analysis of transcripts (MacDonald, 2001), which Glaser (1978) had described in detail. Data were coded as they were collected, starting with substantive coding of the data. Constant comparative analysis was used throughout this process to compare new data and coding to existing data and categories. Open coding (Level I coding) was used to organize data into all the relevant categories that fit the data, which included existing categories, properties of those categories, or the development of new categories (Glaser, 2002). Contrary to Glaser's recommendations (1978), I reviewed transcripts line-by-line but categorized by incident to maintain the contextual aspects of the data in the categories. Incidents could be coded into several categories as they may have illustrated several different concepts. I found however that in line-by-line coding (Charmaz, 2003), I frequently lost context and meaning that could only be maintained by coding larger units of data. I used coding memos to ensure that decisions were documented, especially as new categories emerged, and data were re-coded to them. Opening coding allowed for verification and saturation of categories as data collection and coding proceeded.

As categories and their properties developed, I began to hypothesize about the relationships among categories or concepts and the core variable that integrated the categories and concepts (Level II coding). I continued to collect data to saturate categories and further develop the relationship among them. As categories became saturated, I began to use selective coding related to the hypothesized core variable. Glaser (1978) suggested that selective coding focuses data analysis related to the core variable and the emerging theory. I used selective coding for existing data, as well as to guide further data collection. Theoretical sampling was used to address gaps in data collection related to specific categories and the core variable, or to transitions, critical junctures, or significant points in the process that were not fully explored (Morse, 2001a). Through this process, I tried to obtain full specification and elaboration of the concepts and basic social process into an integrated theory (Glaser) rather than mere definition or description (Level III coding).

Theoretical codes were used to conceptualize how substantive categories related to one another (Glaser, 1978) and helped raise coding to a more conceptual level. Thus, my theoretical codes elaborated on the substantive codes to ensure fit with the data. Glaser focused on the development of process in the data, referring to staging, phases, progressions, transitions, steps, and trajectories. Substantive and theoretical coding proceeded concurrently and were evident in my memos. I memoed extensively and used these notations to document my thinking about the coding and relations between the categories (Charmaz, 2003; Glaser & Strauss, 1967). I used both the memoing capabilities of *N6* and my own memoing documents to ensure that theoretical, methodological, observational, and personal memos were recorded in the development of the theory (Hutchinson & Wilson, 2001; Wilson & Hutchinson, 1996). This memoing contributed to my audit trail to ensure rigour in this study. As the intermediate step between coding and completed analysis (Charmaz, 2000), my memoing alerted me to the theory that I had conceptualized in the data, and constituted a significant component of my theory development. These theoretical memos became my summation of the constant comparative analysis process, documenting the categorical and conceptual development of previous interviews. As my study progressed, I re-read these theoretical memos to prepare myself for subsequent interviews and ensure that I was sensitive to the developing theory as I conducted my interviews.

As data were coded, my field notes were also coded into both substantive and theoretical categories and recorded manually and within *N6*. I also made secondary reference to the literature to link extant research and theory with the theory that I was developing through the concepts, constructs, and properties of my analysis (Hutchinson & Wilson, 2001). This literature, which differed somewhat from the body of literature that I had originally consulted in the literature review, constituted part of my data and memoing during my analysis. I thus established a linkage between the current literature and the emerging theory of developing clinical judgement in practice. During the process of open coding, I tried to be very detailed and to generate extensive memoing about my coding decisions and my questions and assertions about possible relationships among the categories. To assure that there is a good "fit" between data, the categories, and the emergent theory, I continued data collection until I concluded that I had saturated the categories.

The process of constant comparative analysis is one of reducing and integrating participants' experiences into a single workable substantive or formal theory that has explanatory capabilities in the real world (Glaser, 1978; Glaser & Strauss, 1967; Strauss & Corbin, 1990, 1998). If participant experiences are relatively homogeneous, the grounded theory that develops may lack depth, scope, and utility in explaining or predicting the phenomenon in its natural state. Because a theory that develops without challenges to its scope and utility is unlikely to be sufficiently robust to address all experiences of the phenomenon, researchers are advised to seek those participants known as negative cases whose experiences are not explained by the emerging theory (Glaser, 1978; Glaser & Strauss, 1967; Polit & Hungler, 1999; Ryan & Bernard, 2000; Schreiber, 2001; Strauss & Corbin, 1990, 1998). Those participants whose experiences seem to be outlying cases falling on the dimensional extremes of concepts or outside of the theory (Strauss & Corbin, 1998) provide challenge or disconfirming evidence, refute the emerging theory, or suggest new connections that force researchers to develop a deeper understanding with greater abstraction in theoretical development (Drummond, Wiebe, & Elliott, 1994; Glaser & Strauss, 1967; Polit & Hungler; Schreiber, 2001). Integrating the data from negative case participants can prompt re-conceptualization of the theory (Ryan & Bernard, 2000), increase the density and variation of a theory (Strauss & Corbin, 1990), and enhance its resulting scope and utility to address all known cases of the phenomenon. Incorporating negative cases, such as new nurses who had left the nursing profession, could be useful in theory development but difficult to achieve due to logistical or ethical issues. I did not recruit such a participant to the study but believe such a negative case would have enriched the data and the resulting theory. In the referent cohort of graduating nurses, there is no evidence that such a person exists.

I did however interview two participants who I came to view as negative cases since their experiences did not fit the developing theory. These individuals had volunteered for the study as part of the purposive sample. During their interviews, I quickly realized that their experiences were quite different from the experiences of most other participants. From discussions with their peers, they too acknowledged how their own experiences differed from the experiences of these peers. They both explained to me what they lacked in their work environments and the effect of these omissions on their development.

One new nurse, the eleventh participant, worked in isolation in nursing practice, having access to multiple sources of research evidence for practice (textbooks, journals, Internet) but limited access to the wise counsel of more experienced nurses. Although considered competent by her supervisors, she did not feel competent. From this nurse's experience, I more fully developed the category of the social learning network and explicated some dimensions of the network that were not evident in the other settings, most notably the importance of immediate accessibility to sources of knowledge within the practice setting. She provided many examples of events from her nursing practice that illustrated the importance of feedback and suggestions from more experienced nurses, thus contributing significantly to the inclusion of social context of nursing practice in the developing theory. She was very analytical about her own situation and identified many of the issues that her situation raised for her, and for my theory development. These issues challenged the developing theory to further explain her situation and raised to my awareness the impact of the lack of a referent group for new nurse development, and the reciprocal nature of the learning process. Categories were more fully developed because of this participant's data.

The second negative case, the fourteenth participant, illustrated the effect of new nurse behaviours on the teaching and mentoring behaviours of more experienced nurses. This participant had not progressed as most other new nurses had (from her perspective), and because of her supervisor's concerns, had undergone remedial learning to correct her deficiencies. This participant identified her responsibility for her lack of professional development of clinical judgement as being due to her lack of engagement with the social group and her lack of willingness to ask questions of the nurses she worked with. She acknowledged several times that it was her own behaviour that conveyed to the more senior nurses that she apparently was not interested in receiving their assistance to develop her clinical judgement. The experience of this participant, particularly in terms of her failure to develop professionally (according to her own report), challenged the developing theory and illustrated the importance of the new nurse's behaviours in seeking learning and being receptive to feedback. Categories related to the reciprocal nature of learning in the social network and response to feedback were developed and explored because of this participant's data.

At the second interview, she indicated that she was trying to rectify the social situation on her unit and that she was interacting to a greater extent and was receiving more assistance from her colleagues. Both participants were insightful about their own lack of development and attributed it to several factors in their work situations. Their lack of progress in developing clinical judgement however enhanced subsequent theory development and necessitated the incorporation of aspects of the work situation and the behaviour of the new nurse into theory development. The modified theory was useful in explaining their lack of progress and identified aspects of the work environment that needed to be changed to better facilitate their development.

Once categories were saturated and no new information was forthcoming, I stopped data collection and completed construction of a parsimonious set of integrated concepts from my analysis of my data (Glaser, 1978; Hutchinson & Wilson, 2001). I generated a theoretical explanation for the process of the development of clinical competence and clinical judgement by new nurse practitioners that explained both the progress those who developed professionally as I hypothesized, and also explained the progress of those who did not progress as expected.

In summary, the process used in this study was cyclical and iterative. Soon after I conducted the first interviews and transcription was complete, I began open coding, using both manual notations and *N6*. I created theoretical memos to document coding decisions and to elaborate on the developing concepts and relationships. Prior to each new interview, I reviewed the theoretical memos and categories that were developing through data collection and analysis. As new categories developed and as I started to code data selectively, I re-read and re-coded earlier interviews, developed concepts, and explored relationships among them. This process was particularly useful since I conducted second interviews with half the participants and had the opportunity to explore developing concepts in greater depth with them. This process of data collection and data analysis proceeded concurrently, with each interview transcript undergoing several episodes of open coding and selective coding as new concepts developed. As I coded, I developed concepts through saturation of categories that I subsequently explored in the literature. As I integrated data from the literature, I continued with coding of interviews, while at the same time positioning the developing theory within extant literature. This whole process was characterized by an integrated process of data collection from participants and the literature, data analysis and subsequent data collection, and theory development that directed subsequent data collection and analysis.

Researcher as Instrument

Since I, as researcher, am the instrument of data collection, my pre-conceptions, biases, values, and beliefs became significant ~~as I~~ collected and analyzed the data. As such, it is imperative that I declare and acknowledge these pre-conceptions prior to initiation of data collection. I am a nurse educator in a university nursing program with a long-standing interest in the thinking processes of nursing students as they learn the substantive knowledge of the discipline. I have organized my courses to engage students in the learning process with active learning strategies and an emphasis on their critical thinking skills. I have also researched in the area of preceptored clinical learning experiences for nursing students, and have a bias toward the positive effect of mentoring on the learning of novices. I have maintained a professional relationship with many of my students after their graduation from the nursing program, and through discussions, have some appreciation of the issues they encounter early in their nursing careers.

I acknowledge that I have several assumptions relevant to this research. Based on my past experience and the reading I have done in this field, I believe that nurses begin to develop their clinical judgement in nursing education programs. I also believe that clinical judgement is based on formal and scientific knowledge, develops slowly through experience, is enhanced by continuing education experiences in practice, and is enhanced by the critical thinking skills of the nurse. These beliefs have influenced how I structure my nursing courses and how I interact with nursing students. Because of my beliefs, I have tried to be particularly vigilant that I have heard the voices of my participants rather than my own beliefs.

In acknowledgement of these past experiences, and significant reading and research in relevant areas, I memoed about my personal biases and preconceptions and attempted to separate my experiences and beliefs from what the participants are telling me about their experiences. I acknowledge that my past experiences will likely have affected how I perceive the data that my participants have provided to me (Peshkin, 1988) but I have attempted to avoid imposing my preconceptions on the data and resulting theory. I also however used my experience to identify relevant data to be included from the literature, an acceptable use of researcher experience and knowledge in grounded theory.

Rigour

Rigour is as important in qualitative research as it is in quantitative research, and needs to be addressed prior to the initiation of the research. In terms of general qualitative research, Lincoln and Guba (1985) discussed trustworthiness as the appropriate means of addressing rigour in a qualitative study and identified the audit trail, member checks, peer debriefing, negative case analysis, and adequate reference to the literature as means of assessing trustworthiness of a study. I addressed this criterion by using memos, clarifying data and checking my interpretation and initial analysis with participants, seeking diversity in my participant sample, and seeking comparable concepts and theoretical constructs in the secondary literature review associated with my analysis.

Glaser (1978) identified four criteria that are specific to grounded theory; fit, workability, relevance, and modifiability. *Fit* indicates that the categories of the emerging theory fit the data. Having the categories of the theory grounded in data and modified as new data emerge ensures this fit. Glaser did acknowledge that existing categories in the literature may also fit with the data and can be used in the developing theory, while allowing for refit of these categories if necessary. I used Benner's theory of the development of expertise in practice (Benner, 1984; Benner, Tanner, & Chesla, 1996b) as a key data source for this study. Although I did not use Benner's work as a preconception for data collection and analysis in my work, as the emergent theory became better conceptualized, I realized that the data in this study corresponded to one of Benner's stages in the development of expertise in practice. I made connections between my work and Benner's and found that the literature on expertise in nursing practice was useful in conceptualizing the theory of developing clinical judgement in nursing practice. The *fit* of this theory with the experience of participants, as confirmed through their acceptance of the description of the stages in the process, and with the literature was useful in confirming that the theory did indeed fit my participants' experiences of their world.

Workability refers to the ability of the theory to explain what is happening, predict what may happen, and aid in the interpretation of events under consideration. In the Stages in the Process of Developing Clinical Judgement in Practice, participants stated that the emerging theory did explain the process they experienced and that the stages in the process were identifiable in their own experiences. Not only did the theory work for them, but they believed it was important that others including nursing unit managers, experienced nurses, and nurse educators in basic education and continuing education should understand the process as detailed in this study. New nurses indicated that the developing theory had *relevance,* referring to the ability of the theory to address core issues that people are experiencing in a particular situation. The theory developed in this study addressed an issue that was of importance to them even though they no longer experienced the process from the start. They wanted the process of entering nursing practice and developing judgement to be better for other new nurses who would follow them into practice. The basic social process of the theory, *seeking learning,* integrates other concepts of the theory and addresses issues of relevance for them in their day-to-day practice.

Modifiability refers to the changing nature of the theory as new data are collected that challenge the existing theory. This theory is modifiable particularly as the context of practice changes. Many new nurses indicated that they found the work environment to be supportive and encouraging, a finding that reflects a practice environment that has changed over the past ten years. The theory generated in this study is applicable to a variety of situations and explains supportive work environments as well as the deleterious effects of negative work environments. The process of grounded theory is based on modification and revision in the process of developing the theory, a characteristic that must be present in the resultant theory if it transcends the specific data.

Further, I recognize that subjectivity may be seen as a threat to trustworthiness, and I have acknowledged my pre-conceptions. I attempted to suspend these preconceptions, disciplinary perspectives, and previous reading to assure that my interpretation is firmly grounded in the data, and can be confirmed by peer review (Wilson & Hutchinson, 1996). However, I also recognize that the theoretical constructs of the emerging theory are due to my interaction with the data (Peshkin, 1988). I verified my tentative analyses, as recorded in my memos, with subsequent theoretical sampling to explore the validity of my analysis (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Using in-depth data collection, theoretical sampling, and saturation of categories and their properties, I was able to identify a core social process that integrates all categories, concepts, and theoretical constructs. This integrative core social process, constant checking and rechecking of coding into categories and their properties through constant comparative analysis, and the maintenance of methodological coherence in data collection and analysis assure that I have worked toward trustworthiness as well as validation of the theoretical framework that I have developed.

CHAPTER 4

FINDINGS

Learning Clinical Judgement in Professional Practice

In this research, I explored the process that new nurses encountered as they endeavoured to develop their professional practice. In particular, I focused on the process of developing clinical judgement that underpins competent practice. Clinical judgment is deeply embedded in the practice of nurses and as such, is difficult to articulate. It develops slowly over time and through practice itself. Such was the case with these participants. In this chapter, I describe the participants and the process as these participants experienced it in their practices, elaborating on contextual, organizational, and social factors that affected the process. I describe the substantive theory that is grounded in the data and has emerged from these findings.

Sample Demographics

A total of 25 registered nurses participated in this study, 10 in Alberta and 15 in Saskatchewan (See Appendix F). Twenty-four participants were female and one was male, with an age range of 24 to 39 years, average age 28 years, and the highest modal response of 26 years. Thirteen participants were married and six had dependent children by the end of data collection. All were graduates of a four year baccalaureate nursing program (four different baccalaureate programs were represented) and employed in Alberta or Saskatchewan during their first two years of practice as Registered Nurses. Five were employed in rural hospital settings and 11 had been preceptored as senior students on the same unit on which they had accepted their first employment. Twenty graduates worked on medical or surgical areas as their first job, three worked on obstetrical units, and one each on pediatrics and psychiatry. All were employed fulltime to meet one of the selection criteria. Within the first eight months of practice, seven had moved to new practice settings for a variety of reasons but only two had moved due to poor work environment. By the time of the first interview, 19 participants had moved to new practice settings, with 13 of those moves related to career planning and desire for challenge in nursing practice. Seven had already enrolled in graduate school and six more indicated the intention to do so in the near future.

By the end of data collection, which extended over a 16 month period, new nurses had between two and four years of practice experience. Only six participants had between two and three years of practice experience on the same unit with the same client group and two of those indicated firm intentions to move within two months of the last interview for family or career reasons. By the end of the study, however, twelve other participants had more than 18 months of practice on the same unit although the timing of these 18 months differed for these participants. Some had 18 months prior to moving to a new unit while others had more than 18 months following a move to a new unit. It is apparent that these participants were willing and in some cases eager to make employment changes related to career planning or seeking challenge in practice.

As a prototype of the new nurses entering practice in Alberta and Saskatchewan, the Nursing Education Program of Saskatchewan (NEPS) Graduate survey was used for comparison of this sample to the graduates of 2001, the most common graduation year for most participants (17 participants). The data reported are from the 2 year follow-up of the graduates of 2001 (NEPS, 2003) and relate only to the 15 Saskatchewan graduates. Unfortunately, this survey is the only currently available cohort data about graduates in either province. In the NEPS graduates cohort, 88.5% were female and 11.5% were male. Before actually seeking employment, 58.7% of graduates were offered employment prior to graduation. A total of 64.4% new nurses obtained fulltime employment in their first positions. The urban setting attracted most new nurses, with 91.3% accepting urban employment and 80.8% remaining in Saskatchewan. Approximately 19% obtained employment in Alberta or British Columbia. A total of 83.7% worked in general hospitals with over 100 beds, with 56.3% on medical or surgical units, 16.5% on pediatric units, and 11.7% on obstetrical units. Two years after graduation, 41.3% were married and 21.2% had dependent children. There were several differences noted between study participants and the prototype cohort data, specifically in terms of the percentage of male nurses, the number of new nurses employed in rural settings, and the number employed on a fulltime basis.

The process of developing clinical judgement

Participants were articulate in describing their own experiences as new nurses in general medical, surgical, pediatric, obstetrical, and psychiatric units. Through constant comparative analysis of the data, I discovered that they presented a consistent pattern in the process of developing their professional practices in varied contexts, settings, and work environments. Their impressions of the practice environment and contextual factors that were supportive or non-supportive of their development were consistent. From analysis of their individual experiences, I have conceptualized the process of developing clinical judgement in practice. Based on these data, I described the stages in the development of competence in clinical judgement during the first two years of nursing practice, and I elaborate on the categories that are pre-eminent in each of these stages. Stages in the development of clinical judgement in practice include the following: orientating to the practice environment, learning practice norms, developing confidence, consolidating professional relationships, and seeking challenge. In all these stages, the over-riding theme has been 'seeking learning', the integrating variable in the process.

In this discussion, I use participants' words to illustrate the various categories of the stages and provide a rich description of their experiences. I have attributed these quotations to the code names of participants. Identifying information within the quotations has been replaced with a generic term in square brackets. Through this discussion, I elucidate the properties of the various categories that support the emergent substantive theory of the development of clinical judgement in nursing practice.

Participant Definitions

In the consent process, I clearly described the purpose of the study as exploring participants' development of clinical judgement in nursing practice. They frequently used the terms *clinical judgement, judgement,* and *competence* in their discussions of their development. To place their use of the terms in context and to evaluate the commonalities of their understanding of the term, I asked participants to tell me what *clinical judgement* and *competence* meant to them. Most struggled to define clinical judgement and often offered descriptions without confidence. Although their definitions illustrated a basic understanding of the terms, there was also a great deal of confusion in their definitions of clinical judgement in particular. Participants were very articulate in discussing their experiences in developing their nursing practice in their specific practice environments. Their descriptions of practice at various levels illustrated their incorporation of clinical judgement in practice, and elaborated on the sketchy definitions they stated. I have relied heavily on their descriptions of practice, and the clinical judgement embedded therein, to ground discussions in the data and to develop the emergent theory.

Clinical Judgement

Tony described clinical judgement as a process of "*using your knowledge of nursing practice, just using your nursing knowledge and common sense to make good decisions…the judgement is based on your knowledge and the research and who you are as a person…and as you get to be a better nurse, your intuition a bit.*" Jody demonstrated a similar understanding in her definition as "*decision making based on your education and knowledge base that you can draw on…so if you see a patient's condition worsening, you use your judgement to make decisions regarding their care.*" Nicky described clinical judgement as "*figuring out or judging a situation, sort of figuring out what is going on with your patient* and Darcy added *just knowing the whole patient…and their conditions.*" Gracie indicated that "*clinical judgement is more geared towards the decision making process.*" These descriptions reflect the separation of clinical judgement from decision making, a distinction noted in the literature but rarely in the discussions of these participants. In general, these participants described clinical judgement as the evaluation or assessment of options in clinical decision making.

Many participants demonstrated lack of clarity in describing the role of clinical judgement in decision making but did acknowledge it as consisting of knowledge. Tatyana described clinical judgement as "*being able to see the picture of your patient and the signs and symptoms that they are giving and knowing how to respond and react to those situations appropriately…Your clinical judgement has to be able to interpret.*"

Chantelle described clinical judgement as *"...base[d] on what you see right in front of you and you make a decision, and I guess that decision is basically your clinical judgement.*" Terry reflected a common belief that clinical judgement is ..."*the ability to be able to recognize a situation where you may need to intervene."* All participants recognized the role of experience in developing clinical judgement, as Jamie indicated.... "*My clinical judgement now is based so much more on experience instead of remembering a scenario from a textbook. I correlate experiences that I've had."* Although participants indicated the belief that clinical judgement is based on experiential knowledge, knowing the patient, and professional knowledge, and that this knowledge is used in decision making to judge the best approaches to nursing care, they were not as clear as to its specific role in making decisions.

Competence

Participants were clearer with their descriptions of competence, although they identified two distinct levels of competence. Typical of most participants, Monica described competence as "*being able to do the tasks that we were trained to do in a timely manner and really, just getting things done and correctly."* Ellen described her ability to safely complete the "*day to day workings of the unit, the medication administration, the bathing, hygiene, interaction with family, doctor orders, all that...Then you just followed the protocols, and you would make sure with a senior nurse that this is the protocol I'm following and is that usually how it goes, and they'll just say yes.*" This level of competence related to following the usual practices, policies, and procedures specific to the nursing unit, and as Sandy indicated, was one that "*got the basics done, and didn't make any major errors."* Ellen was clear that this level implied a level of knowledge in practice: "*it means knowing how to do your skills because of the way you were taught, because of the research and the theory and all that book stuff you did in school… and why you do those skills.*"

Terry elaborated on the expected skills to include "*your skills, your psychomotor skills that you need to be able to perform, and assessment is a big part, and decision making.*" Chantelle also reiterated that competence is a changing state, and that "*you're competent to a degree. You can be competent one day and not the next because they've [researchers] learnt something new if you don't keep up with that…You've got to keep learning and learning and learning all along the way.*" In describing competence as a minimal level to ensure client safety, Kim referred to a "*mediocre level of competence…they [the clients] got straight competent care my first day on the job. I catch other things now that are outside of that minimum level of care.*" Kim also related competence to "*knowing where the boundaries of your own knowledge and training are, and being able to work within those, and being able to clearly know where they are so that you can access other resources [as needed].*" In their discussions, most participants indicated that they achieved this level of practice was achieved after about six months of fulltime practice.

A second level of competence referred to by most participants was one that connoted a higher level of knowledge and confidence underlying practice. At this level of competence, participants indicated that they didn't need to question other nurses about day to day practice and were more self-reliant. Tony described this level as "*making good nursing decisions based on policies and procedures, the nursing process, common* *sense. It's providing safe care for your clients and it's providing the best practice…or research-based practice."* Sandy described this level as:

> *…not just know that you didn't make an error but know that you did great care, that your level of care was higher, that you made sure the patient's going to have the best chance of recovery…It encompasses more levels of care. Not just the physical, the social, the psychological but being able to expand my care to include relating with other professionals and making sure that I'm making their job easier, they're making my job easier, and really making the team work.*

This second level of competence is one that incorporates greater knowledge in practice, the aspect that enables more self-directed practice. Tatyana extended the concept of the knowledge needed for competent practice by stating: "*it's learning how to put things into perspective and to realize and recognize what you are seeing, when it's important to see those things…and having the experiences that I have had and seeing what I have seen."* To Chantelle, competence is "*keeping up with all the new stuff that's coming out…this is doing reading the research for the new stuff because everything changes."* In summary, Lucy indicates that "*someone who has clinical competence is well trained, well educated, current in their knowledge, in their practice, and tries to stay current either by taking courses or reading or staying abreast. Someone that is able to take care of patients, complicated or not, without making any poor judgements or having any bad outcomes."* This level reflects a level of knowledge that goes beyond just getting the tasks done and being organized in the care of clients. The focus is on greater knowledge to support practice such that new nurses are confident that they are contributing to better outcomes for their clients. Many new nurses agreed that continuing to learn was a necessary condition of maintaining one's competence. Lucy indicated that she saw some senior nurses as having lost their competence, "*…that they start becoming* *less competent then [after 15 years]. It's because they don't keep up with their skills and knowledge."*

Concepts of the Process of Developing Clinical Judgement

Constant comparative analysis of the transcript data and coding of data into categories resulted in the identification of concepts that clearly relate to the process of developing competence in clinical judgement. Further coding and analysis of this data identified relationships among these concepts. Theoretical sampling and further data collection and analysis resulted in saturation of these concepts and assisted in further developing the properties and dimensions of these concepts. Discussion of these concepts in depth demonstrates the emerging theory and the stages in the development of clinical judgement.

Orientating to the Practice Setting

All new nurses engaged in a form of orientation when they were employed by a health district or region. For most new nurses, this orientation process was well organized and tailored to the needs of the new nurse. Orientating was a relatively short period of zero to six weeks in length and clearly defined by the formally designated orientation program that is in place for the new nurse.

Formal Orientation Classes

In some instances, the orientation program involved sessions at the district or region level as well as the nursing unit level, formal classroom components focused on client conditions, diagnosis, and treatment, and preceptored shifts in the practice setting (often called 'buddy shifts'). For others, orientation involved signing requisite documents in the human resources department and then reporting to the nursing unit where they might be assigned to work with another nurse for several shifts, or in a few instances, assigned patient care. New nurses precepted in the same setting for their student experiences often fared the worst because the orientation might be waived or shortened given the student's previous experience on the unit. Sandy illustrated this point in the statement "*... because I had been preceptored, the first day as an employed member of the staff, they were short staffed and they just gave me a full assignment. They didn't bother with buddying me for 5 days.*" As Gerry stated,

> *I didn't have the orientation because I had had my practicum in that area. So my first day was rounds and I had no idea who the people were, but it was so a challenge and I was supported by the manager and everyone else.*

During this period, many new nurses experienced a formal classroom learning situation that provided orientation to the graduate nurse role and in a few instances, in-depth information about client conditions on the unit. For the most part, new nurses found these sessions to be very useful and suggested an expansion of these sessions over time. Several new nurses were provided with policy and procedure manuals to review during this period, an activity that several suggested was not useful in part due to the large volume of information that was not immediately relevant or connected to specific client care. Pat stated that "*it's too much in the first week..,and they go over everything and everything that you're going to see, and all your skills that you need to have, and then not until you're actually going to do them, do you go, 'Okay, I know I need to know how to do this.'*" As with Pat, several others suggested that a lot of information was provided in the initial orientation session and that they would have found the same information presented over a longer period of time more useful. Several suggested scheduling formal learning sessions over the first three months of their employment to address client conditions, diagnosis, treatments, and nursing care. As Elizabeth indicated, *"I think it would be good in the first three months to sort of have some in-services for them...I wouldn't cram it all within the first month because you're sort of anxious about working and everything is new, and you can only absorb so much."*

Content addressed in the orientation sessions often related to general agency policies such as fire and special circumstances procedures, human resource issues, as well as specific employment policies and procedures of the institution. Topics addressed were often generic to new nurses on many different units. Unit issues were often addressed in separate orientations conducted by nurse educators on the specific units. These unit-specific orientations were more likely to deal with specific practice issues, procedures, and skills for the client group on that unit. However, as Anne stated, *"the orientation we had certainly didn't prepare us for the job description [of Registered Nurse]."*

Preceptored Orientation

Following a formal orientation session, new nurses worked with precepting nurses (buddies) who oversaw their client care for an average of four to six shifts, but as many as twelve shifts. During this time, experienced nurses provided instruction and direction in the care of clients in the practice setting. New nurses worked with these precepting nurses, sometimes in an assisting role and other times, as the first nurse with the senior nurse assisting them. During orientation, new nurses generally did not have sole responsibility for client care. Tatyana described the role of the preceptor as *"kind of show me what I needed to see and help me along with what I needed to have. As a new nurse, I just learned to depend on other people."*

New nurses generally found the precepted experiences to be very beneficial to learning how to practice on that specific unit. They saw how more experienced nurses cared for clients on the unit, but more important to them, they learned the unwritten information that makes one's practice more organized and efficient. In working with the more senior nurse, they learned usual practices and routines that are necessary to function effectively on that unit. As Darcy indicated, the content was

> *…more about the layout – where things were in the hospital that you needed to go to, like lab, pharmacy, just the major things, and also the same thing with policies on a lot of things that you couldn't do, like chemotherapy, so that was a big thing. The policies, just getting a copy of them and learning where to chart – where things are kept.*

Some preceptors used a more direct approach, especially for students whom they knew from their preceptored experiences. They allowed the new nurse to provide all care and stayed in the background as a readily-available resource.

Preceptored shifts were useful in easing new nurses into the practice setting, as Lynne indicated;

> *we got lots of buddy shifts so that by the end of them, you're already doing things on your own, and they would just hang back as a resource person and they wouldn't even actually come into the rooms or care for the patients. They would just say 'Hi, I'm here today for you if you have any questions.'*

On some units, the new nurse's level of comfort was used as an indicator of readiness for more independent practice. Lynne stated, *"But it was helpful and if you weren't comfortable yet going on your own and doing your own thing after these buddy shifts, you were able to talk to your supervisor and get more shifts because they just wouldn't let you go on your own unless you're comfortable."*

New nurses were sensitive to the social climate of the new unit and indicated how important a welcoming environment was in helping them adjust to the unit. All new nurses indicated that other nurses welcomed them to the unit and that the precepting nurses were positive influences in this process. Carroll's words summarize the response of most new nurses;

> *And the staff on that unit were very welcoming to new people which, from what I understand and from what I have experienced since [on a new work unit], nurses tend to eat their young. That didn't happen to me there. It was great. Everybody was willing to teach and it was actually wonderful to start there.*

Acknowledging that the process of entering a new social group is a shared responsibility, Lynne indicated that:

> *When you first start out, you have to show your other team members that you are a hard worker, that you enjoy being there, that you want to be there, that you are smart and intelligent, that you have knowledge that not only are you giving to your client and help them, but that you have knowledge that you're going to share with your co-workers and help them as well, and they can help you back. So it becomes a shared business. You know, it's reciprocal.*

Several new nurses experienced some challenges in the preceptored experiences. Some such as Monica had a variety of preceptors for their buddy shifts. She stated that "*you just showed up that day and whoever would take you, took you. So it was kind of everybody helped…Sometimes you'd hear 10 things over again….so there was a bit of repetition that way, but it was good to see the different ways that other people nurse and the different experience that they have.*" Pat was offered the second level of the orientation program eighteen months into practice, long after she needed the information. Anne expressed concerns about her own preparation for the experience, indicating that "*I* *felt like I should know this stuff....I can't ask people questions...there was so much to learn that you would never learn it in the orientation."*

According to Dawn's experience, which she generally considered to be very positive, the orientation is intended to assist the new nurse through the first six months of practice to complete the tasks of nursing care in an organized and safe manner. Orientation does not focus on particular ways of thinking, evidence-based practice, or holistic care but rather, is intended to integrate the new nurse into the current practices of the nursing unit. She questioned whether the best focus is in place in the orientation period and suggested that focusing on how to make decisions in nursing practice might be a more worthwhile focus of orientation.

The formal orientation process was clearly delineated by the classroom experience and preceptored shifts. This stage, regardless of its length, precedes the most difficult stage for new nurses, the informal orientation or 'learning practice norms' that continues for the next six months or so of practice. As Jamie stated, "*My orientation program was great. We had twelve buddy shifts plus kind of a classroom orientation. But I remember that first day of being on your own and thinking, 'Oh my God, what have I gotten myself into?'"*

Learning to Practice Nursing

As soon as new nurses assumed responsibility for a patient assignment on their own, they embarked on learning to practice nursing. This responsibility for client care initially seemed overwhelming but was a necessary component for the learning that occurred. This stage continued until the point at which new nurses realized that they could manage the patient load and provide safe nursing care, usually about six months into practice. The point of realization usually came slowly and wasn't a discrete point in time, as Jamie illustrated:

> *I kind of got inklings of it around six months. You kind of get over the terror of "Oh my God, there's so much to do. I hope I don't kill anyone," to feeling like at the end of the day, "You know, I really did a good job today. I'm really proud of this and I didn't do this so well, so tomorrow I'm going to come back and try and do that."*

This point is often identified more easily retrospectively whereas at the time, so many demands on the new nurse's time may have blocked some of the reflective analysis needed to recognize this transition. This stage ended with new nurses knowing that they could 'do the job' while recognizing that there was a lot more to learn.

Feeling Unprepared

Although most new nurses indicated that they felt their educational programs had prepared them to nurse well, most indicated that on entry to practice, they doubted their own abilities. In part, this sense of inadequacy was precipitated by the size of the patient load they were required to assume immediately after orientation. "*I think just the sheer volume of patients is terrifying to new nurses*" (Jamie). Being preceptored in the same setting before graduation did not alleviate the sense of being unprepared although the transition was easier for these nurses. As Kim stated, "*probably the most anxiety provoking [thing] would be just relying on your judgement skills, and probably my judgement skills were better than I thought they were. You don't really trust your own judgement skills very well.*" Lori concurred and added that she didn't question patient care decisions made by other nurses, because "*you don't trust your own judgement and I never would have said that [disagree with other nurses]...cause I was always under the impression [that] well, I'll get in trouble or whatever.*" Anne explained her reluctance to ask questions about patient conditions or nursing care decisions on the unit with the statement, "*I felt like I should already know that stuff already so if they came in with MS, I should have known it already.*" Rose entered practice on a unit on which she had previously been employed and encountered unexpected stress in her practice. She commented:

> *I don't feel that I was any less prepared than any other program would have prepared me, but ...they take the twelve hour RN and put her in charge of the team, and that's beside twelve patients and you have your 2 LPNs, and I felt quite overwhelmed by that because you are also the med nurse and the team leader.*

As Darcy commented, "*the orientation doesn't prepare one for the demands of the role.*"

Experiencing anxiety

Experiencing stress. All new nurses talked of some degree of stress in the early days of practice, including those who had precepted as students in the same practice area. Most reported sleep problems, nausea, or headaches prior to the shift, as Pat illustrated;

> *Actually I felt often if I was working a day shift, at five in the morning, I'd wake up and feel sick to my stomach. There were often times in the morning when I just felt like I just don't want to go, and I just thought maybe it was just me or maybe I wasn't cut out for this, you know, because this was my first job, and I thought maybe I'm not meant to be a nurse. And I would go to work and I'd just dread it.*

Jody attributed her continuing fatigue and headaches to lack of sleep, in part because she had never worked night shifts before as well as to her anxiety that she had not acknowledged at the time but her roommates had pointed out to her. Nicky, working in a rural setting as the only RN on her nursing unit, came home and cried every night for the first "week or two" and thought that she should move away from the community. Tatyana complained of "*sweaty palms, running to the bathroom, heart...tachycardia, those kinds of things and hands shaking trying to start an IV,*" and commented that the same symptoms re-appeared in new or emergent situations. Kara commented that ... *"on my ward, so many of the new grads have left because they see it as a very difficult environment to work in, or they didn't have the support they needed or they were too stressed out when they started, that they left."* She remained in the same workplace.

Fear of errors. The fear of making an error in practice was the main source of anxiety for new nurses, as illustrated by Terry's comment; "*I thought I was going to kill someone. It weighed heavily on me, let's just say that.*" As most indicated, "*I'm a very conscientious person and I was quite afraid that I was going to make a med error or something like that,"* (Terry) or "*What if I get them [complex or high acuity patients] and I don't know how to do the stuff the other nurses are doing?"* (Pat). Lori was concerned about what the more senior nurses thought about her practice, precipitated in part "*because of letters they'll send to the Canadian Nurse on how nurses, young nurses aren't functioning, and all that."* For Tony, the fear was almost overwhelming: "*I'm scared everyday pretty much. That's why I don't like my job. I just don't feel safe. I don't feel like it's a safe environment to practice... it's just waiting for me or somebody else to....I've already made mistakes, that thank God, were not big things."*

These fears were exhibited most frequently in anticipation of coming to work. Pat stated that she feared the patient assignment on her very busy unit, and indicated that "*you would wake up in the morning and just feel sick wondering who were you going to get, like who were you going to be looking after."* Tony illustrated the effect of stress by saying, "*I'd be driving to work and I would think to myself, if I drove my car into the ditch, I'd have a good excuse not to go to work today."* Pat indicated her stress in the statement,

> *Yeah, it's getting off the bus when the bus pulled up to the stop. I could just keep going on the bus, you know. But it's like, no, cause I know what it's like when somebody doesn't show up and you're working extra hard. So no, I'd go in and then it was fine and I enjoyed it.*

Coping strategies. Several reported strategies that they used to avoid or deflect this anxiety. Kim avoided taking breaks during her shifts for fear of forgetting or missing something important. Tony was very "*hard on herself*" if she made errors however small, indicating it was the only part of her life in which she was very self-negative. Many new nurses indicated that they required a concerted effort to initiate their patient care at the start of their shifts, as Monica indicated: "*I usually just sit there, take a deep breath, and then kind of gather myself in my head and then go do what I have to do.*" Darcy, Anne, and Chantelle would arrive for their shifts an hour early in order to review charts and client care before they started. Most new nurses described the strategy of asking others questions to ensure that their planned actions were correct, thus validating their own decision making and avoiding errors, and others described using textbooks at home to review information or learn more about particularly anxiety-provoking situations. Kara illustrated this approach, which was used by many of the new nurses; "*At the time when I first started, I was very aware of disease process and exactly what to expect...more my awareness was preparing myself [with textbook review] and maybe fearfully sometimes, 'Well, what if this happens?'*" Those who did attend formal learning sessions planned by the employer or offered by another agency found the new knowledge helpful in allaying their fears.

This anxiety lasted anywhere from one month to six months, depending on the complexity and acuity of the client population. It also returned with increasing levels of responsibility or emergent situations, as Pat indicated when the unit manager assigned Pat to care for a more acute client group because "*you're good and you can handle it. And that made me feel good but it was also very scary to be in there so early.*" Anxiety characterized the initial six months of practice and its abeyance was associated with movement to the next level in the development of clinical judgement.

Learning to be Organized

Learning to be organized is one of the biggest challenges for new nurses. This ability is directly related to learning how to practice in a new role in a new setting. Even new nurses who had been preceptored in the same setting as students experienced this challenge although it was less difficult for them as they already knew new policies, practices, physical layout, and many of the nursing staff.

Learning procedural skills. New nurses recognized that gaining experience in the requisite skills for that client group allowed for mastery and diffused the anxiety associated with those skills. As Elizabeth stated; "*If I haven't done something before, I finally figured it out for myself. Oh, just do it and then you won't have anxiety about it anymore because then you've done it, and then you're comfortable with it instead of avoiding and passing it on to someone else.*" Jamie captured the challenge of learning skills;

> *You're so nervous because you know your dressing skills aren't great, and you're still a bit shaky, and you have to look up everything at every step as you go along...I tended not to talk while I was doing things...but you can't be competent in that kind of thing and so you have to go through that period of feeling really awkward.*

Nicky found that learning procedural skills was accomplished relatively quickly in her setting;

> *...probably about a month before I felt comfortable with what I was supposed to be doing now and when it was due. ...my main thing was just*

> *did I get everything finished in a day that I was supposed to do. Did I forget anything? I cared about the patients but [I was] more concerned with am I doing everything in the right order and what is supposed to be done.*

Nonetheless, her concern for organization skills over the quality of patient care is evident, as is her focus on completing tasks (procedures) in a timely and organized manner.

Many followed protocols and procedure closely, expressing the need to be consistent with unit procedures:

> *When I came out of nursing schools, I was very much by the book and by protocol and really cut and dry. Just watching what I did and knowing that what I was doing was exactly the way it's written down somewhere so that if somebody asked me and questioned me on how I was doing something, I could say 'Well, this is what I'm doing. This is our protocol on the unit' (Lynne).*

Lynne goes on to say that she was aware that more experienced nurses adapted these skills to client needs but that early in practice, she did not. The need to practice according to norms, especially according to written statements of those norms, was important to the new nurse. Other than referring to procedure manuals, questioning was the main way that new nurses learned how to complete procedural skills quickly as the demand for those skills emerged in practice.

Most new nurses felt confident in procedural skills relatively early in practice, often within one to four months, as Anne indicated; *"It wasn't very long, and IVs didn't take long at all because they were going out all the time, and we were restarting them, and if there were difficult ones, the other nurses always kind of let you try and tackle them or they'd show you how to do things."* Although new nurses were rigid in their procedural practices and avoided criticism or question by practicing according to protocol, they did not encounter these procedural skills as their main challenges.

Completing patient care. Organizational skills were the primary challenge for new nurses;

> *The worst part, the hardest part was organization. It was just being able to organize my day and to be able to get everything done that I needed to do, and I was very, very unorganized....I just found that I spent a lot of my day running around doing things that I didn't necessarily need to do"* (Gracie).

This feeling was especially relevant for those in new practice settings where they were concerned with learning new policies and practices along with learning physical layouts and the people with whom they were working. This aspect of care consumed an inordinate amount of the new nurses' time and concern, and was a significant source of anxiety for them.

> *Trying to keep my organization going, and not have something give, and the whole learning process of how to be organized consumed the majority of my brain time in the beginning, where I had a great deal of difficulty trying to incorporate the family or the psychosocial aspect of the patient, because I was worried that my meds were going to be late, because I hadn't got to so and so's dressing, because this LPN took 15 extra minutes for lunch, and that sort of stuff* (Rose).

Nonetheless they attended to details of care because

> *you get your fingers slapped if you don't do something. Like, make sure their beds are nice and tidy, and their little water jugs are empty, and their little trays are clean. That is not my job, alright? And if it's not done, then oh my goodness, you are an incompetent nurse* (Anne).

One factor that increased this difficulty in organizing related to increased client loads. Dale commented;

> *...the curve was actually kind of steep because when you're in your final practicum and throughout the nursing program...you would start out with one patient and then you go to 2 patients and then to you go four, 5 patients...and four or 5 patients is pretty much where the program stops. And then you're out on the wards and you've got 10.*

Most commented on the transition from student days with the biggest challenge being the need to care for significantly larger groups of clients. Several mentioned that their patient load was also doubled when other nurses were away from the unit for breaks.

Caring for a larger group of clients was complicated by not knowing routines and practice norms of the nursing unit. Pat, who moved to another city for her first position as an RN indicated,

> *I wasn't exactly scared of the patients and I wasn't scared of my nursing skills. I found a lot of my time was trying to figure out their policies, trying to figure out where to find things, what do I do when I've got a urine sample from a patient, where do I send it, what form do I fill out. I found that was the most challenging part of it just because I didn't know any of the routines and I guess that's what the buddy days were supposed to be, but it was such a busy unit, that my buddy was busy with her own patients, and she didn't have a lot of time for me.*

Over time, new nurses learned the routines and practices of the unit, and became more confident in practice:

> *You learn to be a lot more organized in your day. You just learn the general routine of what each ward is looking for and you know that you only have a certain time allotted for certain things and you have to get that done. You learn a lot more that just the general routine of tasks and when certain people come to do what. Booking around lunches and suppers and just the general care of what you need to do for each patient when you get there. For things when I first came out of school, it took me 20 minutes and that may now take me 10. And it's really a lot of organization is what I learnt* (Monica).

Time management skills were complicated by heavy patient assignments, which were the same as the patient loads carried by experienced nurses, often leaving new nurses to provide a quality of care they recognized as below the standards they preferred to provide or that more experienced RNs provided.

Having attained a degree of comfort in organizational skill allowed new nurses to incorporate aspects of nursing care that previously had been omitted. As Sandy indicated, this change happened

> *...probably about six months where I felt more comfortable in the area, more able to find things that I needed, so I wasn't so concerned with knowing where I'd find things and knowing what time to do certain things....So then I could organize my time better to be able to look at some of the more subtle nuances of better patient care.*

In agreement, Kim stated,

> *...most of the skills there are easily learned skills. They're things like IVs and fetal monitoring and things like that, where it doesn't take you very long to get the hang of how to do it. And I think even if they did still take me longer, because I became less focused on doing those tasks, I could do other things while I was doing it. I could do some of those other accompaniment sort of things while I was putting in an IV or while I was doing other things, which in the first few weeks, that was really all I could concentrate on.*

In many ways, new nurses perceived that they had to establish their abilities to organize appropriately for patient care, and that once they had achieved that level, they then had the time and credibility to address other aspects of client care. Most new nurses perceived that they were judged by their colleagues on how well they were able to complete the tasks of nursing care, as indicated by Dawn;

> *...if we don't get those tasks done, then the people that come on after you or the people that have to give report are like, 'Well, why didn't you get that done? Oh great, that's just one more thing for me to have to do." So I knew that that was the bare minimum that needed to get done – changing dressings, getting some assessments done, especially on general surgery.*

Anne indicated the same perception, stating that "*making sure the laundry hamper is empty...beds are nice and tidy...water jugs are empty – and if that is not done, then you are an incompetent nurse.* Many new nurses quickly realized the criteria on which their practice was judged and worked diligently to improve those aspects of care. Until new nurses felt competent in their procedural and organizational skills, they tended not to focus on other aspects of patient care; they remained task-focused.

Prioritizing patient care. Prioritizing patient needs and care was a challenge for new nurses. Jody stated, "*When I first started, I was not very organized. Didn't know what to prioritize, and found it hard to make a decision. Like, this is what we're going to do, because you don't really have the knowledge to back it up.* Chantelle felt that initially, her "*priorities were more black and white...It was based on book knowledge that I knew and the limited experiences that I had had.*" Priorities often change through the shift, as Chantelle acknowledged,

> *...and the priorities might change throughout the day, and that's where you have to switch gears and be flexible...You can't be afraid to set your priorities ....You have to base priorities on.....you have to take what you read through the charts, you take what people say, you probably looked after this patient before, and you take all of that and decide what the priority is, and then you just jump in.*

Chantelle also expressed the concern that new nurses may have difficulties following through on their identified priorities and indicated that "*once you choose your priorities, you have to follow through. Otherwise, it doesn't really mean anything.*" This dilemma was particularly significant in the early months of practice when new nurses were overwhelmed with the organizational demands of patient care. Pat reflected, "*How would I make decisions? It was all based on priority. Like with a baby, you try to do everything but it just happens, you go, 'Okay, what needs to be done? What's the priority?'*" However, she also went on to state,

> *...it was hard to do your holistic care and to look at every side. Especially when you're new and you're basically just trying to get through your assessments and to get the basic skills, and trying to look at the different aspects of the person. That was tough....You try, but in a day when you're really busy, it just doesn't always get thought of.*

Others indicated that they didn't respond to important aspects of needed care that affected their organizational skills and client outcomes, "*...whereas it might have been something that I brushed off in the beginning of a shift and then later on, [I] had to deal with a bigger problem"* (Gracie). In part, this arose from their consuming focus on tasks and organizational skills but also reflects a lack of experiential knowledge in recognizing situations as they develop. In contrast, Kara found that she was distracted during care by important or significant aspects of the client's condition, and was unable to address the whole situation or less important aspects of care more appropriately. She became consumed by the identified priority of care: *"I didn't have the confidence in my balance of time and organizational skills. And so I was quite affected by just a few things and those would pervade my thinking."* Anne identified the importance of critical thinking in the identification of priorities, but acknowledged the effect of the practice setting:

> *...I believe I know what my priorities are when it comes to patient care but again it's going to be overwhelming [be]cause of the whole routine thing again that you need to get to know in the hospital but I do feel more confident...and I do feel my critical thinking has increased substantially now.*

Delegating care. New nurses often imposed an unrealistic expectation of independent care on themselves;

> *I never wanted to ask anyone for help [with patient care] because I didn't want them to think that I couldn't do it, so I tried to do it all myself. I didn't really know what other people could do for me... It took a while for me to get over that and realize that I didn't have to be super nurse and do it all* (Pat).

Jamie echoed the same expectation:

> *And I remember that delegation was and still is something that I really had to get used to and feel comfortable with because I wanted to be super nurse. I wanted to be in control all the time. I wanted to meet all of my*

> *patients needs all of the time and it was really difficult for me to ask for help cause I'm a perfectionist and I always have been in everything I do, and it was almost like asking someone else for help was admitting that I couldn't do the whole job.*

This self imposed expectation was reinforced when other nurses or LPNs had refused to provide assistance when new nurses had directly requested it. Pat illustrated this experience with the following statement;

> *I didn't ask at the beginning, but even at the end when I did ask, there were lots that weren't willing to help...You would say, 'Hey, would you mind helping me with this?' and they just kind of look at you, like 'Those aren't my patients.' There was a little bit of attitude on our unit.... I would never go up to someone that had refused to help out. I would work 10 times harder and go home half an hour later and get it done myself.*

Delegation to LPNs seemed the most difficult aspect. As Rose indicated, " *I asked one of the LPNS, could you please dress this foot,[because] so and so needs his TPN? And then one of the other LPNs told the one I had asked and said 'No you don't do it. She needs to learn how to organize her day.'*" Rose completed the task herself, and indicated that with more confidence in her role, she would have insisted that the LPN complete the requested task. She indicated that with her current level of confidence, 2 ½ years into practice, she would insist on assistance. Gerry indicated the same concern, expressed some reservations about the full scope of practice of LPNs, and questioned her own liability in situations of delegation.

Using strategies to cope. The main focus of new nurses early in practice was on the successful completion of client care without error. Their biggest issue, organizational skills, consumed most of their focus in the provision of nursing care early in practice. To improve these skills, new nurses incorporated a number of strategies such as asking more experienced colleagues. As Tony indicated,

> *I always tried to find the answer myself, but I find when you're a new nurse, you're already running behind and it's hard to take the time to look things up in the policy and procedure manuals…it's so much quicker just to say, 'Where's this?' or 'Where's that?' or 'How's this done?'*

To save time, new nurses relied on their more experienced colleagues including practical nurses to learn routines and procedures but were also concerned about burdening these nurses with their frequent questions.

New nurses benefited from a practice environment where teamwork was a norm, as they could work with colleagues to learn policies and procedures without needing to question as much. As Pat indicated, "*Just helping each other out was a big thing too. …we would team up to do a few things together really quickly, just to get things done faster and a bit more organized.*" Primary care nursing approaches were particularly problematic as they needed to provide total patient care, and after orientation, did not have another nurse directly available for questions. Having charge nurses in the practice setting alleviated some of this difficulty as a senior nurse was generally available for questions and discussion.

Many nurses devised strategies to address their own limitations in organizational skills. Darcy, Chantelle, and Anne arrived at work early in order to "*…go all the way through the patients' charts, to look out for the important things and organize my day.*" Dale expressed the thoughts of several nurses, indicating that "*Time management was the big thing. You really have no choice but to put your head down and just go, because you haven't learned the time management skills.* Chantelle expressed concern about the quality of her care when she was busy; "*…when you first got out of school, it didn't matter if you were there until midnight. You made sure that every thing was done just exactly so. …if you don't have the time, you forego that for a higher priority.*" Many new nurses indicated that their holistic care was very limited by the demands of organizing care for a larger group of clients. Only after they had mastered these skills did they begin to provide more holistic care as they idealized from their educational experiences and the way they wanted to nurse.

As in other aspects of learning to practice, new nurses learned from the mistakes that they made in organization. Pat discussed learning her organizational skills, indicating that *"I guess by making a few errors and not doing things properly....you would just get caught in one room, and it's already coffee time, and you haven't even looked at your other two kids, and just learning from mistakes I would have made."* Elizabeth "*double-checked things a lot for myself*," and every participant commented on a focus on tasks in early practice. Most recognized this focus as counterproductive to the quality of nursing care that they wanted to provide but embraced this focus as a means of getting beyond it. As Dawn indicated;

> *You're just so focused at first on tasks, and nursing can be really task orientated, if you allow it to be. ...if I'm working a night shift and I have 10 patients on my unit, we'll set up a board of everything that has to be done with that patient, and it'll list their IV and their activity level and what assessments need to be done for that patient...and dressings, that type of thing, and you can really be driven by those tasks...It can just be so very, very task-driven and I don't think I could enjoy nursing until I got beyond that.*

All new nurses indicated that the initial period of employment was characterized by a focus on organizational skills and task completion. Although they all recognized this focus as being less beneficial to client care, it was also a necessary step in learning how to care for a group of clients. As Rose indicated, you learn to do that quickly because that is how you are judged in practice. All those new nurses who moved to higher acuity sections of their nursing units, or to new nursing units, reverted back to this stage, albeit for only brief periods, to learn how to practice in the new setting.

Decision Making in Practice

The most challenging aspect of client care involved the decisions that nurses make in their daily practice. Initially the decisions that new nurses encountered arose from learning to practice nursing on a specific unit and were often related to organizational demands. Questions such as "Where is…", "How do I…." and "When should I…" elicited information on organizational and procedural skills. With more experience, these questions began to change to issues more related to questions of client care. These questions were similar to "This is happening. What should I do?" and ultimately, "This is happening. I think I should…What do you think?" Slowly new nurses learned the usual practices on their nursing units and suggested nursing care, although they continued to seek validation of these decisions from their more senior colleagues. Without a doubt, decision making constituted the biggest and continuing challenge of learning to practice.

Thinking in a linear manner. In the first few months of practice, often up to six months into practice, new nurses focused on learning practice norms, unit routines, and policies and procedures. This focus on learning the ways of the nursing unit resulted in new nurses who were focused on tasks: …*"my main thing was just trying to learn the order of operations on the unit. That was what I focused on. Getting this task done, and this task done. So it was more of a task-based thing" (Nicky).* Chantelle explained her task focus as related to the demands of the workplace;

> *There was just so much to learn…You'd get on the ward and you have to learn how things work on the ward and you're just trying to settle into*

> *your own routines. You've got to get comfortable with that before you have time to branch out and do these other little things that really helped improve your knowledge base.*

This focus on tasks was a means to cope with the stress of working in a situation where new nurses feared harming their clients and were overwhelmed with the amount of responsibility they needed to assume; "*Okay. I'd have to say it was quite nervous, and I was able to take on one task at a time and just do things like that and in numbers, but just one at a time and that's the way I got through my day" (Lynne).* This approach was used by most of these new nurses.

Although these quotations speak to their work focus, they also reflect their thinking patterns at the time.

> *Well, I think that I would do one thing at a time cause I couldn't do two or three or four tasks at a time yet. ...I'd get one thing done then I'd be able to do the second thing, and I would just keep going like that right through an entire shift. So I always felt like if I completed something, I could go onto something else and I'd have to say that the decisions I was making at the time being just simple things, easy things that you do a lot of in your nursing training, in your schooling and things that we had read about and you could base it on that. That's all I had to base it on was my knowledge at the time. I didn't have experience. (Lynne)*

New nurses recognized that their decisions were linear and that they weren't coping with their decisions as more experienced nurses were. They needed to finish with one situation requiring decisions before moving on to other decisions. Kim described decision making in terms of tasks as well as clients, indicating initial difficulty in coping with the demands of multiple clients:

> *...more than one thing for each client, and also more than one client at a time. Initially, I would come in, and because that's what I had learnt in my nursing program, is that you prioritize your clients based on who needs to be seen first. But once I had done that, then it was very much one client at a time. Go in and do what you need to do, go to the next one, go in and do what you need to do. And as I got more skilled, I was much*

> *more able to bounce back and forth between clients and certainly keep it all straight in your head, and be able to multi-task between people.*

As Lynne alluded, they also tended to focus on the more obvious aspects of client care and may have missed other more important aspects. Kara illustrated this point very effectively;

> *...mainly I would do it from an approach of the simple things that were happening with that patient. I could pick out the major categories of changes and status or whatever, but I would have never been able to put it all together at that time....I'm thinking of major changes. I mean you would see changes in their vital signs or they start bleeding large amounts...I didn't have enough judgement to really see the subtle differences....It would be the biomedical changes that would make them obvious to me.*

This linear thinking changed over the first four to six months of actual nursing practice and may have been a reflection of the stress experienced in the first few months of practice. The change is subtle and often not noted at the time, as Jamie illustrated in discussing her change in thinking; *"[In the beginning] I have to stop myself and say, 'Okay, what's the first thing, what's the second thing, the third thing?'...instead of just being wrapped up with the 'a' and 'b'. ...what's happening right now [two and a half years into practice], I can look down to 'p' and 'q' that are going to happen in 5 minutes."* Most new nurses described this step-by-step approach to thinking as occurring early in practice and that it reflected the focus necessary to complete particular aspects of care. With less need to focus intently on one aspect of care (such as a particular procedure or assessment), new nurses seemed able to address more aspects of care at the same time. They acknowledged that experienced nurses did not limit their thinking to single aspects of client care and aspired to the ways to thinking of these more experienced nurses, which they typically described as 'multi-tasking.'

Thinking critically. New nurses entered practice with the expectation that they would need to learn a great deal about the specific practice setting in which they had accepted employment. In all their educational programs, they had been expected to practice using critical thinking skills and most described their own critical thinking skills as 'fairly well developed'. For Darcy however, critical thinking was "*different from how they taught it in the school…I don't think I ever used it like that. You're thinking on why you're doing that for that situation. But I never went through it as a logical process, like thinking the exact steps. You just kind of do it" (Darcy).* Critical thinking was more likely when a new nurse encountered a very ill client or a new situation, and that "*you go through every[thing], as least you know one system kind of affects another…you do it more without thinking" (Darcy).* Regardless of how they described critical thinking, they were all committed to critical thinking as a means of addressing practice issues and making decisions. As new nurses, they anticipated that their critical thinking skills would assist them to gain the knowledge needed for safe competent practice. Kim stated,

> *I think those skills [critical thinking] are more important than any other skill because the other skills, you forget. … So those skills [like reading an ECG] go by the wayside for sure but the ability to think critically and the ability to analyze information, those are skills that you could apply to anything.*

When they entered practice, the organizational demands of the practice setting, the stress they experienced as new nurses, and their own lack of experience in the setting all contributed to changes in the ways that they thought about their patient care in actual nursing practice. In the early months of clinical practice, new nurses were focused on learning organizational skills and the routines of the nursing unit. They tended to seek information on usual practices on the nursing unit and, considering their needs to 'fit in' and their own lack of confidence in nursing practice, made decisions in accordance with those usual practices. Pat indicated this tendency;

> *I don't know what I based it [decision making] on. I just learned to work according to priorities, and get things done according to priority. When I first started, you have three patients and you go assess them, and it was kind of ... "Okay, this room is close. I'll go to this patient", but then I learned, "No, no. You go to the one that's more sick, the one that's going to need you", and just kind of base it on that. You don't really think through how you're going to decide. It just kind of comes. It's second nature. Just kind of what you're supposed to do, and where you're supposed to go.*

All new nurses commented that they didn't think they used their critical thinking skills effectively in the first four to six months of employment, although the use of these skills was not absent from their practice. Gracie summed up many new nurses' lack of critical thinking in their practices as indicative of a lack of confidence in decision making; "*I wasn't confident that I could make of lot of decisions by myself, and so I almost always sought out people to help me, like to ask and to inquire.*" At two months of practice, Monica felt she made decisions only "*...with a lot of help. I would definitely have had another nurse holding my hand through that [decision making].*" Due to this lack of confidence and critical thinking in practice, many new nurses accepted the decisions of others without question; "*It puts you back into that almost student mode in a way, cause you're relying on someone else's knowledge" (Darcy).*

Jamie, as with several others, thought her critical thinking skills were more focused on self preservation than client care.

> *I think my clinical judgement [critical thinking] when I first started was that I didn't want to kill anybody and I think my actions were directed more against doing harm than for doing good because you're so worried that you're going to give the wrong medication to the wrong patient...And you're just trying not to screw up.*

Ellen concurred, indicating that *"...at the beginning, the focus is on yourself, where do I fit in here, what do I do, what don't I do?"* Dawn echoed similar sentiments and identified a change in thinking that reflected a changed purpose for critical thinking; *"I think sometimes when you start out, you do it [critical thinking] because you don't want to do anything wrong and then it changes to [that] you don't want to do anything that is going to hurt the patient. You know, it's not me. I'm not the focus anymore. ...that's a type of change that happens once you go to thinking differently that way."*

Many new nurses were prompted to use their critical thinking skills by judgement errors they made in practice. Monica described a fairly typical interaction with a physician whom she had called about a client situation but found that when he arrived on the unit, she was questioned: *"...by the doctor saying 'well, what's this?' or 'So what is the lab result on this?' And it only takes a couple of times of standing there like a complete idiot that you learn to go to the charts and figure it out."*

Other nurses were fortunate to have mentors who modeled critical thinking in the practice setting:

> *I had one nurse that I worked with. I always would think of her because anytime I had a problem, and I was thinking something wasn't quite right, I would go to her and I'd say, 'You know, this doesn't look right.' And she'd say, "Did you check this, this, and this?" And I got to the point where I'd go, "Okay, what would Dawn ask me – What are the things she's going to ask me first?" And then I would just get to that point where I would check those things first and then go talk to her, and she really taught me a lot. I learnt a lot from her....I didn't think through the steps and that's what she really made me do. And so I definitely learned to step back and look at everything, look at the whole picture. (Pat)*

Tony, who worked in a small specialized unit within a larger organization, stated that she was better able to develop her critical thinking skills because her work unit was not very busy. She equated the slower pace of her nursing unit to an environment that supported critical thinking by allowing her to look information up, spend time with her patients, and take time to develop plans of care to better meet their needs. She did not have access to a role model and was not able to validate her thinking with other nurses, a factor that she found detrimental to her professional development. Other new nurses did commit themselves to critical thinking and described their thinking in the following way; *"I would just kind of sit down and just kind of think things through, I think" (Terry).* This new nurse indicated that this approach was used from the time of entry to practice, and the lack of critical thinking by the nurses on the unit was one of the reasons Terry moved to another setting.

Monica indicated that early in practice, she didn't pick up the little things that she now notes, and Sandy stated: "*I saw the more obvious things and missed some of the things that weren't as obvious, or weren't things that I would pick up from looking at the patient. There were more things I would pick up from looking at the chart."* Kara indicated that "*…I didn't have the confidence in my balance of time and organizational skills. And I was quite affected by just a few things [important observations] and those would pervade my thinking,"* such that she didn't notice other aspects of patient situations or attend to other needed aspects of care. As Pat illustrated, her assessments were accompanied by emotional stress and little critical thought:

> *…when I first got there, I did the instant panic. I wouldn't think things through. I would just look and see this blood pressure is low. 'Oh my God, it's low.' And I wouldn't think 'Okay, what's causing this to be low. Should I try another arm? Should I….' You know, I didn't think through the steps.*

Many new nurses did not have confidence in their critical thinking skills in part because they realized that they were often missing important aspects of assessment data on which to base that thinking. Lack of confidence in one's own thinking processes was typical of new nurses, such that they relied heavily on other health care professionals to make decisions for them. These decisions made by others guided the new nurses' practice in the first few months, until they gained confidence and overcame the stress they were experiencing as they learned routines and practice norms. Ellen acknowledged her dependence on more senior nurses; "*... I definitely wasn't involved as much or really looked to my senior nurses for guidance, for step- by-step-by-step, and not as verbal with my assessment. ... you know, what I saw, what I thought I saw, what I thought was happening, and not verbalizing that as much."*

With experience, new nurses used their critical thinking more, especially in new, novel, or perplexing situations. All new nurses indicated that they felt they thought more critically about their client situations when they felt more confident in practice, which included feeling confident in client care and relationships with their colleagues and other health care professionals.

Changes in decision making. Most new nurses reported the most dramatic change in their thinking patterns over the first six months of practice, particularly in addressing common aspects of client care. Initially, new nurses generally were not confident in the decisions that they were making and tended to seek information or direction from more experienced nurses. Most new nurses acknowledged that early in practice, they were using their "*textbook knowledge*," which they recognized as foundational but not sufficient to address many of their nursing care issues in practice. For example, in the care of a very ill infant, Pat was "*seeing all those textbook things*" but did not know what to do about the situation. Many new nurses were reassured by knowing the routines of care and focused on completing those aspects as Lynne illustrated; "*I was very much by the book and by protocol and really cut and dry…just watching what I did and knowing that what I was doing was exactly the way it's written down.*" Anne, two years into practice, does not remember being guided by routines in her early practice, but noted that new graduate nurses on her unit display this behaviour.

Due to their own limited experience, lack of confidence, and fear of errors, new nurses deferred to the judgement of their more experienced colleagues. They continued to defer to the judgement of their colleagues until they had gained sufficient experience with the client population of the nursing unit to recognize the normal progress for these types of clients; "*…you'd have one child and you'd learn from what they went through, and then you would just kind of apply that to every other kid you had* (Pat). Many new nurses indicated that early in practice, they did not note the more subtle aspects of client situations, did not note details of client situations, or did not note them as early in their client situation. More experienced nurses assisted them in their care and answered their questions. Monica described this knowledge as "*passed down knowledge*" that was very useful in helping new nurses function in the work situation. This situation was more evident and more prolonged in interactions with physicians, as Monica illustrated with her comment, "*I would have called him [the physician] and if he said, "No, I don't want to come," I would have said "Okay" and charted.*" For all these reasons, new nurses lacked confidence in their decision making, as Kim illustrated;

> *In the beginning, I may have taken longer to be confident in that decision …or waffle about it before I would decide. In the end, that might come with either the amount of time I had been there or the number of times I had seen it. You just know more what to expect.*

The transition to a more self-reliant form of decision making occurred subtly as the new nurses gained experience with clients and confidence in their procedural and organizational skills, a transition that Jamie called a "*rite of passage.*" Lynne illustrated the effect of no longer needing to focus on skill development;

> *...because I was very task-orientated and couldn't look at the whole big picture of what was happening. I'd only look at portions of care at the time and now I can look at the whole big picture....[It] opens your eyes to a lot more things when you have the time to do it as well as your focus is a little bit different. You don't have to just do one thing at a time so I can take a look at the whole thing, the whole picture.*

Many new nurses noted this transition about six months into practice but indicated that it was more a process that occurred over the first six to twelve months of practice. "*It's just something that you aren't even aware that you've developed, that you do, and you just do without even being overtly aware*" (Kara). The transition was noted by a change of thinking in practice, as Jamie described, "*You start to multi-task and you start to think ahead and you're not just so concerned about listening to bowel sounds, but while you're listening to bowel sounds, you're doing five other things at the same time.*" Because so many experiences were new for these new nurses, this change occurred subtly and most could not identify when it actually occurred. Many new nurses suggested that they reverted to a less independent form of decision making as soon as they encountered new situations, which typically happened less and less frequently over the first year of practice. New nurses likely move between feeling confident and not confident in their decision making, depending on the client situation.

Being more organized and able to complete procedural skills more quickly provided time in the workday for thinking about patient care, as Pat illustrated; "*I could stand in the [patient] room and talk to the parents about their child, and what to expect,* *and listen to their concerns. And I just had the time too because I was more organized. In the beginning, you just didn't have the time to stand there and discuss anything, so it just didn't happen.* New nurses became more adept at collecting assessment data, discriminating among the "*important and semi-important*" (Monica), and through the tutelage of more experienced nurses, noting more subtle aspects of client care and responded to them appropriately. As Lucy stated, new nurses "*became more strategic in their thought.*" They had more experiential knowledge on which to base their decisions and as several participants indicated, this knowledge "*became second nature*" (Pat, Monica). Ellen described her thinking at this point as more integrated;

> *The first thing up front [in your mind] is your assessment. While you're assessing this baby, you're getting the history from the labor and delivery nurse and our whole focus is on trying to figure out what is wrong and how to fix it.*

Typically, these new nurses started to focus on client outcomes of their nursing care, an aspect that they didn't really consider early in their nursing practice;

> *I guess I am looking at the outcome specifically, but I don't see it as that. I'm still looking at needs, the daily needs of the moment, without pushing it further to actually thinking about it or verbalizing the outcome but that's part of it (Gerry).*

These new nurses started referring to their abilities to anticipate needs and outcomes and make decisions based on the desirability of those particular outcomes. This ability developed slowly after experience with multiple clients with similar conditions and through concerted thought and reflection on client care. They were better able to establish priorities in care, and had less fear in making their decisions. At times, new nurses also accepted responsibility for taking some risks in their decision making. Initially, new nurses did not recognize their own knowledge and when they did, they may not have had the confidence to act on their observations. With additional experiences and validation by more experienced nurses, they were more likely to trust their experiential knowledge and current observations;

> *Really, it's just the experience of it....you really don't know what a really sick person looks like. You don't have a sense of where this person is going. Watch this person. They might be stable right now but you have that thing in the back of your neck that goes "Something isn't right." And you don't have the confidence to go either to the physician or the resident, and go, "If I just show you the numbers [assessment data], they all say this person is fine, but this person isn't fine"* (Dale).

Their confidence to make decisions in practice was "*growing continually day by day*" (Monica).

This growing confidence in practice contributed to a different level of participation in the care of clients, likely occurring about eighteen months to 2 years into practice. Several new nurses indicated they were better able to participate in the care of clients as part of a team and that they were more likely to interact with other health care professionals including physicians with confidence. They accepted responsibility for their decision making and began to advocate on behalf of their clients. They were more knowledgeable about what their clients needed and more likely to insist on the attention of other health care professionals to their client needs. Their decision making continued to be integrated, and as Kara indicated,

> *...they [clients] may have a change in their status at this time, and it doesn't necessarily mean that it has to be looked at right at that second. It's something you keep as information but you would make a judgement based on if another change takes place that is related to that first change. It becomes quite complex (Kara).*

They brought subtle changes in client conditions to the physician's attention and several indicated a beginning trust in their own intuition. These new nurses continued to consult with their colleagues as well as physicians and were more likely to engage in discussions of client situations and alternatives to care.

Most new nurses noted that they had also changed their relationship with more experienced nurses, indicating that they continued to discuss client care with their senior colleagues but their discussions were more consultative. They also noted that other less experienced nurses were starting to access them as resources for client care decisions;

> *...it has to do with that mystical period where you less often go to people with questions and people start coming to you with questions...I can't tell you when that started to happen, six months or a year, but somewhere in there, there was a flip where the younger staff were coming to you....It's just a slow transition. It's like a set of scales where at the very beginning, you have all the questions and they have all the answers, and over a period of time, that changes (Dale).*

Most also indicated that they accepted responsibility for the decisions they were making and were willing to "*bend the rules*" on occasion when they felt the situation necessitated such interventions. Several indicated that their relationships with physicians were in fact better when they were willing to assume greater responsibility for their decisions. Several new nurses also found that they started to see themselves in a leadership role in terms of patient care, a transition that several valued and enjoyed. Most also indicated an understanding of the process that new nurses were experiencing in their entry to practice and thus created better learning situations for new nurses based on the issues that they encountered in early practice. This study focused on the development of clinical judgement in the first two years of practice but it is evident in discussions with these new nurses that their clinical judgement and clinical decision making are continuing to develop.

Validating decisions. New nurses need opportunities to discuss their decisions with more experienced nurses and will seek this consultation with them during their care, most often through questioning. Chantelle indicated

> *...two heads are always better than one and that other nurse has probably come into situations that you maybe haven't encountered yet, so you can always ask, "Have you done this before?" or "Have you dealt with this before?" or "In your experience, have you...?" or "What do you think?" It's someone else to bounce things off of, and that's why it was such a safe environment even though we were dealing with fairly high acuity and high tech machines. There was always another nurse to ask.*

Occasionally, the nursing unit was structured such that more senior nurses as charge nurses were readily available to new nurses. Pat illustrated this approach, indicating that she would approach her charge nurse, saying,

> *"Okay, this is what's happening. Do you mind checking on it," or I would snag the resident as he's walking by and I often would say, "Just so I know, do you mind telling me if this looks okay to you, or what you would do." I did that lots and maybe I drove them [nursing staff] crazy, but it helped me just at the beginning to know that I was on the right track.*

This questioning and dialoguing with senior nurses was even more useful if it was combined with a more 'hands on' approach to assessment of the client, followed by discussion of the assessment data and subsequent decision making for care. Unfortunately, this did not happen frequently even though many new nurses commented on its effectiveness. This questioning approach, which was new nurses' most frequent means of engaging others in their decision making processes, was generally supported and encouraged by more experienced nurses.

Not all new nurses experienced positive outcomes with the approach, as indicated by Gerry who found that on her unit, seeking validation resulted in others taking over her care; "*Whereas on [a surgical unit], you say that [questioning] to someone and they just* *take over and they're going to do the care of the person instead of just help[ing] you or reassure you or just validation in some way."* Not all new nurse decisions were validated by the senior nurses. Experienced nurses often offered other ways of dealing with particular situations and new nurses typically accepted the decisions of other nurses early in practice.

With more experience, however, new nurses would attempt to validate their decisions but found that in some situations, they might not agree with the more senior nurses' judgements. New nurses required a degree of confidence to proceed with their own plans in spite of lack of support by the more experienced nurses, but with confidence, they began to do so cautiously. Kim illustrated this change; *"I probably got more confident in my ability or my judgement skills, and then was more likely to advocate stronger for my client.* At a certain point, the process of validation became the process of consultation, wherein new nurses engaged their senior colleagues in discussions of client care and progress in a more consultative fashion, as Pat stated, "*just to have that second opinion because you're not 100% sure, and I would often ask for that.*"

Thinking intuitively. Slowly, some new nurses started to rely on what they called intuition, but they did so hesitantly and only after validating some of their observations with more experienced nurses. This approach emerged much later in practice, and in part was related to the number of clients with whom they had had experience, and the response of other nurses and physicians to this type of unsubstantiated observation. Likely as a reflection of their limited number of years in practice, several new nurses alluded to their intuitive approaches to client care but did so cautiously;

> *I don't know the exact definition of intuition but I do feel I have some of it. I think that's because of being in the area I love to work in as well but you just feel that what you might do next is going to help (Lynne).*

Most new nurses did not make reference to intuitive thinking at this stage in their careers.

Most new nurses viewed clinical judgement and decision making as synonymous. When discussing their own development, they tended to move between the two words as they described the process that they were experiencing. This situation is not surprising considering their definitions of clinical judgement that tended to reflect the decision making component of clinical practice.

Sources of Knowledge

New nurses entered practice with a degree of confidence in their knowledge from their educational programs, but quickly learned that their generalist knowledge was insufficient for competent practice in their chosen practice settings. They acknowledged the practice expertise and clinical knowledge of their more experienced colleagues, and recognized significant differences between their thinking patterns and those of experienced practitioners. Their sources of knowledge were varied; *"...maybe you've read an article that says this way would be better, and then you use the manuals too, and then you use other nurses too" (Lori).*

Nurses: The learning network. The primary knowledge source for new nurses was the other more experienced nurses in the workplace, especially as new nurses attempted to become more organized in nursing practice. As Lynne stated;

> *"I used the nurses more so. I found that for a specific need at the time being in order to do one thing at a time, I needed help quickly. I needed help and knowledge right there. What would work best at the time being, and I didn't have time to flip through a book or an article or something like that specifically when I was at work. So I found that the nurses were my biggest number one resource and later on, when I was able to organize*

> *better and that sort of thing, I could read about situations and how to deal with things, and use the nurses' knowledge a well as books and journals."*

On units with a large number of nurses, new nurses could find many others who could answer their questions. *"You've got ten other nurses on with you who have been there, done that ...know what they're looking for and know how to talk you through things. So even if it is really busy, you can grab someone to walk you through how to do things" (Tatyana).* When new nurses encountered new situations, they approached another nurse with the issue and indicated, *"You need to tell me what I need to do."* In most instances, senior nurses were open to providing the necessary information.

The willingness to provide information often related to the reciprocal relationship between new nurses and the rest of the nursing staff. As Chantelle indicated; *"You had to know your stuff and you had to work hard. You had to have a good work ethic and you had to give respect where respect was due, to the older nurses or the one that had a bit more education, but all in all, they were just fabulous."* The willingness of new nurses to engage in the work of the nursing unit, to the extent that they were able, was an important factor for experienced nurses to feel committed to assisting them to learn. Those new nurses who were too independent from other nurses "*...can get yourself into trouble too*" (Sandy). The relationship with other nurses formed the basis for learning relationship that existed among new and experienced nurses.

New nurses were particular about who they asked for help, and if they had a choice, often approached nurses who were considered experts in the setting or whose practice they admired. Lori stated that,

> *I'll ask them, "Would you do it this way?" and if it's the good nurses, they'll say, "Well, you know, I'd probably do it this way. It's a little bit faster." And I'll generally go with what they say. Because they've been*

> *working for a long time and I know these people I pick are people I'd like to copy, people that I really think are good…they know what they are doing, and so I'll generally go with what they say.*

Many new nurses stated that nurses with between ten and fifteen years of experience were their best resources. Their conclusions were based on their own experiences with nurses in practice; "*Now I know the staff better, in who's been there longer. It's easier to tell…this person's been here for 15 years. This person's been here 10 years. I'll go ask the person who's been here 15 years because it's something they will know*" (Sandy). Nurses with two to four years of experience were also considered a good source of information since they generally knew how things were done on the unit, and "*…they were quite understanding of the position that you were in, and they very easily answered questions" (Carroll).* New nurses approached other new nurses with the kinds of questions they were reluctant to ask more senior nurses, often relating to equipment use or other questions that had been answered previously. In some instances, new nurses did not want their mentors or the senior nurses to know that they were asking 'stupid questions.'

New nurses questioned nurses whose practice they admired in their practice settings. Dawn said,

> *…you can tell who the nurse experts are where you work.- they're the ones that everybody gets when they can't start an IV or everybody goes to when they have a question about…the protocol for this and what do we usually do here? Or if you look at somebody and you just have that feeling about a patient, and you want to talk to someone about it…they tend to be the ones that a lot of people go to.*

Experienced nurses who were valued for their abilities to answer questions in practice were described as "*very kind, they're very generous, and they always have the time to do that. They've got ten patients of their own, but they have the time to do that for you"*

(Dawn). Even after new nurses felt comfortable in the work environment, they still needed consultation with experienced nurses, and continued to approach these experienced nurses; *"I could do without them but we still make a habit of bouncing things of each other, just because then we all feel safe"* (Rose).

Many new nurses were concerned by the lack of willingness, or possibly the lack of ability, of some practicing nurses to answer 'why' questions. As Carroll stated;

> *…you can ask the question, but if you ask 'why?' after it, nobody seems to know the answer, and I found that happened to me a lot. Like "well, we don't do that," and I would say "why?" And nobody would have an answer…so there's a lot of, "this is the way it's done, and that the way it is," and they resent it.*

Many new nurses experienced interactions with nurses where they felt there was a lack of interest in being open to change and reluctance to answer questions. Terry indicated that in her first practice setting, she received comments such as, "*Well, maybe that's how you learnt it in school but we're not going to do it that way because we don't do it that way here.*" Lori reported similar responses when she questioned whether she could deviate from the usual practice norms, by stating, "*Well, I could do it this way or God forbid you ever say, I was taught to do it this way, because that's a real disaster zone right there…and you just get yourself into big trouble. It's hard.*" Although almost all reported such interactions with some nurses, they also noted that they were relatively few in number.

Other healthcare professionals. In their educational programs, many new nurses had learned about interprofessional practice and entered professional practice with an expectation for collaborative practice and teamwork in the care of clients. They expected to engage with other healthcare professionals in discussing client care and determining best approaches. As they entered practice, they were often overwhelmed by the demands of their workloads and found that teamwork did not work in practice as they had idealized in school. Terry expressed disappointment with the healthcare team concept that she saw on her first nursing unit;

> *We were taught that everyone worked interdisciplinary and everyone was allowed to ask questions and that kind of stuff and everybody's input was.... you know, you're free to give it. And then when I got working, I discovered, at least where I was at the first place, that that wasn't always the case. So and it was actually quite discouraging for me when I first started working.*

Pat, overwhelmed with her workload and the responsibility she had assumed, *"found often at the beginning, I worked a lot of nights, because I found I would switch my shifts, just because day shift was too intense for me as a new grad. And a lot of us would do that just because you had too many people in your face, and it, it just was too busy and so at nights, it was...... you would go to your other staff."*

In particular, new nurses had difficulty working with physicians, and in all cases, were very hesitant to approach physicians with questions about client care.

> *There was one doctor who was really nice, but most of them, they're sort of on a power trip, and I don't know. I just didn't feel comfortable talking to them. I did my rounds with them and tried to get them out the door without causing a conflict because they were known for yelling at nurses and making scenes, and that kind of thing, so.... I tried not to talk to them as much as I could, pretty much. Especially at first, I was... I was pretty scared of the doctors just because of the reputation they had around there* (Nicky).

Many new nurses expressed reluctance to approach physicians with questions, suggesting that they were too busy, disrespectful, or intimidating; *One surgeon in particular was very..... I was terrified of him when I started. He was incredibly intimidating"* (Jamie). Others experienced a lack of respect from physicians, which Anne attributed to her inexperience; "*there's a lot from the physicians, a lot of the surgeons. When I started, there were probably eight new grads and the orientation just didn't….. We were still very wet behind the ear. I mean, you can understand their frustration" (Anne).* Over time, Pat, as with many others, found that some physicians were open to questions about patient care; "*Yeah, there were a few of them. The one surgeon, he was very good. He was very approachable and you could ask him lots of questions."*

By the end of the first six months of practice, new nurses still tended to avoid physicians and interacted only briefly with them. They generally weren't considered a resource for learning in the early phases of new nurse practice. This reluctance to approach physicians slowly abated so that new nurses were more comfortable and confident in their requests for medication or assessment. Their interactions however tended to be brief and specific to the issue at hand. With confidence and more experience, new nurses began to engage physicians in discussions of client situations and offered their own suggestions for care or treatment. This mutual relationship is the one idealized by many new nurses but it was not achieved until eighteen to twenty-four months into practice.

In contrast, many new nurses did work cooperatively with, and learn a great deal from other healthcare professionals such as pharmacists, as Nicky indicated, "*They were really easy to talk to, and I would often phone them with med questions or this or that, and they were really good."* Most new nurses used other professionals as resources in their learning; "*…and just really phoning other disciplines. Be it that I phoned the lab on a test…I saw that this person had this test done, but there's no results. That's really sort of where I get my knowledge from" (Elizabeth).* Kim involved professionals from other agencies in her practice; *"I find myself calling other agencies, calling if it's related to specific questions about case stuff, ...other health professionals that I know, like I call pharmacy all the time and ask them questions, and other professionals that have more experience than myself."*

Several nurses had entered nursing practice in provinces other than where they took their educational programs, and found that they needed to learn a slightly different healthcare system where roles and relationships with other healthcare professionals differed. In particular, many found that the roles and scope of practice of Licensed Practical Nurses (LPNs) differed, often within the same province, and in some instances, from agency to agency. Tatyana, who worked closely with LPNs in a rural setting, indicated, *"I have no idea if it's that way in the rest of the province, but their scope of practice is significantly more expanded (in Alberta), and I never would have leaned on my LPNs there (in her original province of licensure)."* Gerry found the issue of scope of practice particularly challenging as a new nurse;

> *I haven't had the experience of "okay this is my role, this is my area and where do the boundaries meet or the major overlap." I've been looking through the SRNA information and the only thing I've read of was delegation and LPNs. They're not to do the full nursing practice that RNs do, but yet I see them doing the full practice that RNs do, and when I'm working, I'm thinking okay so if I'm still responsible although I'm not being told that I am responsible, then [what] if something happens? .... There's that underlying fear in my mind.*

Most new nurses indicated that they learned a great deal about routines, policies, and procedures from LPNs, but this orientation can lead to blurring of professional roles, as Carroll indicated;

> *But it didn't take me long to realize that the LPNs that I work with in [current nursing unit] are far stronger than any LPN I worked with on [the previous surgical unit]. They're incredibly strong LPNs and when I*

> *say that, keep in mind that there's also a lot of blurring of [roles] which I don't agree with but at the same time, but there are strong LPNs..., I find that the new grads especially are learning a lot from LPNs, which like I said they're very, very good, but there is not as much RN learning from the senior RN, which I think is a problem.*

Learning from the LPNs was characteristic of new nurses in the first six months of practice, a time when new nurses had less confidence in their organizational skills and procedural knowledge. As Carroll suggested, there may have been some socialization into inappropriate ways of thinking about client care as new nurses approached situations as LPNs might. In most instances, LPNs were very supportive and helpful, although several new nurses felt the role difference contributed to poor relationships with LPNs on their units. Rose experienced a negative change in relationship when she entered practice as a new nurse;

> *I had worked in [a small city hospital] since I started nursing training as a 'nurse assist' and was treated quite wonderfully by the staff, especially LPNs..... Oh they took me under their wing, they showed me, I learned so much from them and then when I graduated, it's like that bridge was gone and all of a sudden it was, "well, you're the nurse, so you have to learn to do this [by yourself], and they were almost resistive [sic] to helping me out.*

Most new nurses appreciated the assistance by all other healthcare professionals, except physicians, in helping them learn to practice nursing. In most instances, physicians were not approached for assistance, but in those situations where they were, they tended to be very helpful and supportive. The barrier to incorporating physicians into the learning network of new nurses seemed to originate with new nurses themselves.

Formal knowledge. New nurses entered nursing practice relying heavily on '*textbook knowledge'* because the educational program was their main source of knowledge. This source however was sometimes denigrated by more experienced nurses.

Kara stated that she had to *"really show them that I am knowledgeable. You know, I have a different type of knowledge than you [senior nurses] have, but the knowledge that I have is important and you need to respect that. And it's not happening."* Many new nurses had graduated from nursing education programs that focused on skills of information access and critical thinking, skills that they felt were not valued in the workplace. Opportunities for new nurses to incorporate these skills into their nursing care were limited, and they rarely saw such skills overtly modeled in the workplace by their senior colleagues, possibly due to the cognitive nature of these skills.

Most new nurses relied heavily on their textbooks for answers to practice questions but their use of these resources generally occurred at home after their shifts. Pat realized that content concerning her clients' condition was not provided in the orientation program, and *"I sat at home and I just studied every night, when I was at home, or every day off, I studied, just to get familiar with all the different repairs and different disorders."* All these new nurses reported similar reliance on their own textbooks and personal time to develop their knowledge of client conditions and treatment. Some however did report use of time at work to look up patient care information, as with Terry, who stated, *"if I needed to look something up, not a large amount of time, but I had enough time. I carried my books around."* Other units had resources available, but as Jamie observed, *"In terms of resources, we had a lot of resources but I just found that we didn't have a lot of time to access them."* Lynne indicated that,

> *Our textbooks are all outdated so I found our textbooks very tough to find anything but our journal articles... We have them going through the staff room, and if a new one is available and very applicable to us, they're actually taped right on the unit...and they're good. We have research on*

> *everything, and it's readily available to us, and if we want more, our educator and manager will get us more. Some of the doctors bring things in for us as well. We do have a few journals in our coffee room as well. I find those the best. The textbooks seem too outdated very quickly.*

When asked about use of libraries associated with some acute facilities, most indicated that they were aware of a library in the hospital (if one existed) but didn't know where it was and had never used it. Lack of time and inability to leave the unit except for meal breaks were cited as the main reasons. Some new nurses reported using the libraries at their universities to seek resources to support evidence-based practice or to address certain practice questions, although as Lynne noted,

> *I have only been to the library a couple times since I finished school actually…most of the time, it's the stuff that I can see readily available to me on the unit and that's what I use the most. The things that are basically in front of me and I don't feel like I have to go hunting and searching for it.*

Nicky had access to the library in the hospital, but *"I never even went in there because it was so small, and I was sure everything must be pretty dated, so my textbooks I thought were just as good as anything I could probably find."*

Policy and procedure manuals were valued resources in the first few months of practice. Most new nurses viewed these manuals as evidence-based and thus, were confident in relying on them to guide their care or procedural skills. Lori demonstrated this belief in her statement, *"they have a manual, a nursing manual, and if you've got to do a procedure, I just use that too because it's obviously documented. This is how they want it done here, so I follow that."* Lucy indicated,

> *…that was part of the learning process of how to do things. You know, how to do things correctly was to do them exactly the way you've been taught or exactly the way you'd read them through the manual as opposed to once you've done the skill or done the particular assessments a few times, your own personality or practice enters it.*

Several new nurses indicated that patient care checklists would have been useful in the early weeks of their practice to help them become organized and complete nursing care in a timely manner: *"For myself, the ideal orientation might have some checklists so that you know important points to be aware of, along with the scheduling [time management]"* (Gerry). Procedure and policies manuals were seen as valued sources of structure and standards in the new practice environment. However, as Jamie noted, some nurses referred new nurses to these manuals instead of answering questions or demonstrating procedures;

> *A lot of the answers were, 'Well, if you don't know how to do something, go look it up in the policy and procedure manual.' Well there's four of them and they're eight hundred pages each. So you know, when you have to go hang blood or do something that has to be done in a relatively short time frame, the last thing you want to do is sit down and read through a big policy manual. But that was kind of the standard answer for a lot of people. They said well just go look it up.*

Monica stated that because she feared encountering some complications of surgery in her client situations, she read about them beforehand to "*give you a heads up of what's going on before you walk in...finding out how to deal with each of them. Knowing if it's important enough to call the doctors in or knowing what to do."*

The most limiting factors related to their limited use of resources in the workplace related to their lack of organizational skills and thus, lack of time.

> *As far as literature, I find that I don't really answer questions in my job with literature, because I don't have time to read it then. It's usually reading afterwards to see "okay, did I do it right?" I don't have the time to come home and grab my book and take it to work and research it then. That it's usually coming home after and reading up to see, and then I know for next time, so I guess it that the textbook kind of side of it is a resource for more for next time [rather] than usually the time that it happens (Kim).*

This explanation was offered by most of the other new nurses. Several did acknowledge looking up needed patient care information in the workplace, but cited time limitations as they did so. Other complicating factors in using these resources in the workplace included lack of up-to-date resources, inadequate or lack of access to computers with Internet connections, and a workplace that didn't value research.

Some units had provided formal classes to address information about common patient conditions and treatments as part of the orientation program for new nurses. This type of orientation occurred for approximately a third of these new nurses. When formal classes were provided however, they were often available weeks or months after new nurses had started employment, in order to gather a large enough group of new nurses to run the classes. For instance, Pat was offered the 'conditions and treatment' content course she felt she was lacking eighteen months into her practice on the unit. She declined the opportunity at that time as she felt she had already gained much of the information informally. The nurses who took advantage of these orientation classes stated they were very useful and added to their confidence in learning to provide care to clients. Many of the other participants indicated the desire for such classes, stating that they would have benefited from these sessions early in their practice. Lucy felt the classes she attended "*helped as well because you're in a less threatening environment and you can kind of learn that way.*"

Continuing education and in-service presentations are considered appropriate media for assisting new nurses to achieve competence and experienced nurses to maintain competence. For most of these new nurses, these learning opportunities were very limited if not non-existent. One new nurse reported attending three conferences in her first year of employment, due to having a manager who *"always talked to me about leadership and fostering your future leaders…and she did a lot to build me up that way…when I worked for her, I went to three conferences that [the agency] paid for" (Carroll).* She was the exception. Most new nurses reported attending only a single conference in the first two years of employment, and several had not attended any. On many units, conference attendance was offered to senior nurses, while junior nurses were *"frustrated because she [nurse manager] keeps sending the same group of people….but you've got three nurses on your ward who's been doing obstetrical nursing under three years. I would think that new nurses would be your priority…"* (Rose).

All who attended conferences reported on the benefits of exploring particular areas in depth and learning new approaches to care. They were enthusiastic in their endorsement of practice conferences as beneficial to their learning in nursing practice. In particular, they identified the impact of the new knowledge on their confidence in practice; *"How far back we are from other places – like areas that we need to really improve on"* (Darcy) and *"…that started making the rest of the working environment much more comfortable because the staff knew that I had actually passed and had been okay in my practical part, so they knew they could trust me with other things"* (Sandy). Pat indicated, *"In March that year, I took an ACLS course, and I found that to really make a huge difference in my confidence, in my ability to just assess the situation, and I thought, after taking it, that I should have taken it a lot earlier."*

Attendance at in-services was inconsistent for most new nurses. In part, this spotty attendance related to infrequent in-service offerings, as Terry indicated on her unit; *"I guess they had some students that got preceptored and whatnot and I guess they'd* *come and do posters, and then the nurse educator would come and do a thing. I don't think I saw her do any in-services while I was there"* (eight months). When in-services were offered, new nurses had difficulty attending;

> *...you would report off [to another nurse] but you knew they weren't going to check on your patients, and the whole time you're sitting there, thinking, 'Nobody's checking on my kids and what if something happens,' you know. So you just, you couldn't go to them. They'd have to be on a day off (Pat).*

"Just in time" in-services that are frequently offered to nursing staff to deal with immediate practice issues were questionably helpful as new nurses frequently found them to be inadequate for their needs; *"...they were going to do a full dialysis, and she's [nurse educator] is in the hallway with all these tubes and bags and stuff. She goes, 'Okay, this is basically what we're doing,' and that was like five minutes...and this is not good. I'm glad I didn't have her, care for that girl, because it just wasn't enough"* (Pat). Nurses in rural settings had little in-service available and had to travel to other centres for their courses; *"...that's one of our responsibilities in the small town, and yeah, once a year or once every two years, I believe they send you for a course, a two day course, or one day if you've taken it before"* (Chantelle). One agency had developed workbooks for new nurses to work through (at home or at work) to address specific practice competencies and several agencies offered opportunities for new nurses to attend surgery or work with other health care professionals for a day to enrich their knowledge. These strategies were both valued by new nurses as adding to their knowledge for practice.

The reliance on textbook information and formal learning sessions continued until such time as the new nurse felt comfortable and competent in the nursing practice of the unit. As Elizabeth stated, *"I go [to in-services] because I need to know what I'm doing,* *and why I'm doing it. I don't like saying 'I don't know'...because I don't think that's good enough. I think that I should know...because it increases my confidence."* Although new experiences continued to present to the new nurse throughout the first two years of practice, they occurred less frequently and presented in a context where the new nurse was confident in other areas of practice. As Kim indicated, *"It just doesn't happen as often, and the longer you practice, the more of those [clinical] questions you've already answered, so you don't have to this time."* With experience in the practice setting, new nurses also found that their textbooks no longer addressed the higher levels of information they needed for practice, and they were more likely to consult with expert nurses or other health care professionals.

Gaining Experience

New nurses entered practice with some experience in practice from their educational programs. Although students have a variety of experiences in their educational programs, new nurses will all have met specified entrance competencies of their professional associations after graduation from their programs. Those students who were preceptored as students on their subsequent employment nursing units will have some practice experience in those settings. These fourth year practica usually extend for six to twelve weeks, depending on the programs from which new nurses have graduated. Six to twelve weeks of preceptored experience facilitates the orientation of new nurses to these settings and speeds up their orientation as Graduate and then Registered Nurses.

Experiencing nursing. All participants identified experience as the key to becoming more knowledgeable and confident in nursing practice, and as many stated, *"...experience is probably the most important thing" (Jamie)* or *"learning just by doing"*

(Darcy). The role of experience in their learning was pivotal to the development of clinical judgement. Jamie described the process of developing clinical judgement as

> *...just the sheer 'being there and doing it.' The experience. But I think also because I was and am conscientious about how to improve myself as a nurse. I think that played a big part in it. I'd like to think that I got there before other people did because of that [having a focus on learning in practice].*

Dale found that a nursing unit with a diversity of patient conditions was helpful in gaining experience because "*You get a full spectrum of people...So that's the diversity...and so you've got a level of acuity, but you have enough staff that you can deal with that level of acuity safely because you have other people to go to as a resource.*" Chantelle concurred, indicating that "*the more time you spend and the more diversity that you see, the more you learn how to act or what the needs are in certain situations.*"

Lucy indicated that initially, she practiced 'by the book', because "*that was part of the learning process of how to do things. How to do things correctly was to do them exactly as you were taught or exactly the way you'd read through the manual as opposed to once you've done the skill or particular assessment a few times, your own personality or practice enters into it.*" Experience makes one's knowledge real, as Dale indicated; "*...you can read about what a really ischemic foot looks like, you can see pictures of an ischemic foot, but until you see an ischemic foot... and you actually know. And then you can watch that progression. That's when you know that something has to be done now.*" Experience provided the knowledge of how to address patient issues and the timing, as Tatyana explained;

> *...the biggest thing for my clinical judgement. And just knowing when to react a bit more, both ways. Something that I might have jumped on when I first came out...'Wow. The glucometer is 23.' Now, depending on who the patient is, I'd be like, 'Yeah, the glucometer is 23'.*

In part, experience provided new nurses with an understanding of patient outcomes and the impact of nursing decisions on those outcomes;

> *When you're first starting off, you're like, "Oh well, they didn't have any output of urine. They'll probably pick up or whatever. But now it's like, "Okay, you need to be on that right away." You learn from things like that where you probably should have checked the output, been more on top of that. And you learn things like picking it up (Lori).*

New nurses recognized that they did learn from their experiences and provide better care because of it;

> *The more you look after people and I see certain things happen and certain people....Boom. You recognize it in the next person. You feel unfortunate for that first person, for you to be able to work through it, to see that in another person... But yeah, definitely now, you just know the things [assessments] to pick up* (Dawn).

Many alluded to a beginning recognition of patterns in client situations, a skill that no one could explain to them and that they had to discern for themselves. All new nurses recognized the importance of repeated experiences in helping them to learn the patterns. When senior nurses validated their recognition of these data configurations and their interpretation of these patterns, new nurses gained confidence in their abilities to identify more subtle changes in client situations.

Darcy explained that "*just being exposed, taking care of patients that had...a new experience...and the more you take care of them, you kind of [think], 'Oh yeah, I remember this patient that had whatever, and he experienced this, and you just kind of learn that way.*'" Repetition and similarities in experiences enhanced learning. Experience had the effect of changing the focus of new nurses, as Anne indicated; "*I find with the new nurses is that they just follow routines. ...experienced nurses do the same routine but in the routine, they're constantly educating...They're talking to their patients* *while they're doing other things, yet they're still assessing the patients."* Experience is important in helping new nurses move their practice from routine to a higher level of assessment and intervention.

Many new nurses also found that certain experiences were very vivid in their memories; *"I'll never forget that day. I can remember every single detail about what she looked like and how she just progressed, not progressed, but how she went down. ...I compared everything ...after that to her" (Pat).* Dale concurred, indicating that experience involved both seeing "*a wide spectrum of cases*" as well as paradigm events that were encountered only once; *"The first time, it's like 'Wow! That's an ischemic foot. Then the second time you see one, you're like 'Okay, it's not quite like the last one.' But the first one is kind of a startle. It's like the first time you auscultate someone with pulmonary edema. You know."* Anne remembered certain referent episodes in her experience; *...probably something significant that has happened to the patient that were probably involved in. Whether it was a mistake or whether it was something good that you've done."* In all instances, the episode remained vivid and became a reference point for practice for new nurses.

New nurses valued the opportunity to observe the practice of experienced nurses who practiced well;

> *If you have someone who's really experienced and doing positioning, you learn to position well. ...then you learn how to do that a little bit better, because you watched how exactly they're doing it and you pick up their habits rather than picking up habits from somebody who isn't so experienced, and both of you sharing bad habits instead of picking up better habits (Sandy).*

New nurses would often request an opportunity to observe the practice of those they considered to be good nurses; *"...more experienced nurses who did a good bandage* *change on them yesterday, according to the patient, have them come in and wrap the patient's hand or whatever, so I can see how they did it and maybe learn to do it that way myself*" (Sandy). Dale found that learning experiences were often created for new nurses by asking for their assistance with procedures;

> *"I need a hand with this complex dressing. Can you give me a hand?" So that way, it's not a threatening teaching environment but at the same time, you're seeing it. You're seeing what the more mature nurse is doing and at the same time, you're not being threatened by it, and it's not patronizing to you.*

Other times, experienced nurses offered learning experiences by stating, *"This is the new dressing modality that we're using with suction pump to increase perfusion. We're just about to do the dressing. Come and see it." (Dale).*

New nurses also needed the guidance of experienced nurses to practice more effectively in certain situations. Jody was having difficulty explaining to a doctor why a particular patient was not ready for discharge; "*...she [an experienced nurse] was glad to help me out, and I was glad for her...She suggested other ways because I had no idea where even to start. Like who do I call, who do I talk to. So she was quite good in guiding me that way*" (Jody). Experienced nurses provided direction and answered questions and generally were an invaluable asset to new nurses. Over time, Terry did

> *...so many assessments in a day of whatever patients. Say you're looking at someone, that you're assessing them for abdominal pain, and based on a hundred other ones that you looked at, you always have that knowledge in the back of your head, and maybe it's presented this way, it's presented before, or maybe it could be this thing...*

With time and experience, Terry indicated that one "*didn't have to spend so much time checking every single thing.*" New nurses develop practice knowledge to guide their practice.

Gaining experience also involved making some mistakes; "*I was learning a lot by trial and error, by making mistakes myself...It was just with experience. I had so much experience in different situations and I was thrown into a lot of situations just because you're the only one there [in a rural hospital]. And I think I became very confident in the judgements that I made and I knew what was going on with my patients and I felt comfortable*" (Nicky). Pat also acknowledged making mistakes in judgement that contributed to learning by "*making a few errors and not doing things properly.*" Although new nurses feared making mistakes, they often learned a great deal from them, as Tatyana indicated: "*My experience, good or bad, learning from what I have done or seen or haven't seen, and knowing histories and what I'm going to jump all over and what I'm not.*" Prior to committing a medication error, Tatyana experienced a sensation that something in her practice was in error, but as she stated, "*I'm thinking 'this [medication] a big dose' but you kind of go, 'Well, the kid is not breathing.' You silence the little voice that says 'Hmm?' The only thing that made me realize the dose wasn't right was when I was giving report.*" Although she sensed that something was wrong, she didn't trust her own judgement at that point in her practice and completed the act. Kara indicated a different perspective on her learning in practice; "*So I don't know if I would consider it a mistake but it would definitely be a learning experience. It's something that I would do differently next time because I've experienced it before.*

Senior nurses helped new nurses make sense of their experiences, and added to new nurses' learning from their own experiences. At times for new nurses, learning involved "*seeing how other people have done it...We're on call lots, so when* *emergencies come in, I get to view other people and how they do their practice*" (Tatyana). Other new nurses asked questions about other patients on the nursing unit;

> *…was working with one of the patients that I hadn't worked with yet. I would ask her a few questions just kind of in case, you know, what if I worked with that child the next day or something. Sometimes you would ask questions and ask how things were going, and she'd tell you some stories and kind of tell you a few things and that would help so that the next time you worked with that child or someone like that* (Pat).

Terry "*gain[ed] a lot of knowledge*" from watching someone who had done something for a lot longer than oneself and Gracie stated that one "*needs experience to develop that [clinical judgement], to be able to make an appropriate decision and the right decision for your patient.*"

Experienced nurses' commentary on the new nurse's experience was very beneficial in enhancing the amount new nurses learned from their experiences; "*….and they [staff nurses] were really good to ask questions, and often they would just kind of say, 'Okay, this is what you're looking for, this is what you want to do, check for,' and we did (Pat).*" A key way of passing experience on to new nurses involved telling stories prompted by clinical events.

> *You get a little piece of that information and you keep it so that if you ever see some of those symptoms, or that same situation going to happen, it's like you have almost a little piece of their experience to fall back on… to learn from their mistakes. You know, things that they wished they had done differently, or things that they just instinctively knew something was wrong, and it's like they were passing on that information to me to look out for this one little thing because it might turn into something huge." (Ellen).*

"They'd bring you the neat little knick knacks [tips and suggestions] that you could use in practice" (Lucy). Lucy stated her practice *"became more grounded in experience and backed up with more evidence. I would think just in general, there's just more basis to it*

[from the stories]." New nurses also gained vicariously from incidents that occurred on their nursing units when they were not present, but as Sandy indicated, "*you learn by overhearing what happened with the patient.*"

As much as these new nurses valued their experience, they also indicated that experience alone was not responsible for development of their clinical judgement. As Kim stated, it includes

> *...increasing your knowledge base, continuing education, continuing learning. I do a lot of reading outside of work in my practice area, and attending conferences and education things. And then clinical practice, the more you do it, the better you get at it, and I think people that are learners by nature will learn from their practice, but there's a lot of people that don't learn from their practice.*

Darcy acknowledged learning by doing, but also "*...by research, just by looking things up and reading up on things that you don't know.*" This research was often triggered by events in practice; "*...little things triggered that. I'd look stuff up more, or we'd really discuss more signs and symptoms, or even family dynamics*" (Ellen).

Many new nurses scheduled additional learning opportunities for themselves such as working with an enterostomy nurse or observing surgical procedures as a way of enhancing their knowledge of patient conditions. It's clear that new nurses recognized their limitations in terms of experience, and perceived additional experiences as the necessary means to develop their knowledge and clinical judgement. Kim stated that, "*There's a body of knowledge that you'll never find in a textbook, and you can either learn it from twenty years of your own practice, or you can access little bits of that information from other people who have been working for twenty years.*" However, as several indicated, time and experience alone do not ensure the development of clinical judgement, an observation that several new nurses made about experienced nurses who had not continued to learn in practice.

Personal experience. Participants identified personal experiences that influenced their nursing practice. Although one might attribute these personal experiences to older participants, that situation was not necessarily the case. The average age of participants was 28 years at the first interview, with 5 participants over the age of 30 years. The types of work experiences that influenced their current practices included hospitality services, in one case for over 10 years, aide positions in healthcare, past military experience, and retail positions. Most commented on organizational skills and communication skills learned in these types of positions.

Some commented on personal life experiences that affected their nursing practice. Darcy related the story of a grandmother's illness;

> *When I was in second year, my grandmother had a stroke and I was with her for the whole 7 days. I never left her side, and I think that's where I got it from. You know how to treat people and those strokes especially. We see a lot of them out there on our floor sometimes, and it's devastating, and to be able to relate especially to the family.*

Dawn echoed similar sentiments from her experience with her mother's illness;

> *I think I see people more as people. I've had a couple of experiences in my own family now too, where people have been sick...I can tell someone who looks at my mom and thinks that she's just there. She's just the surgery she's had done, or' let me just do this or that', and then they leave the room, and the person who sees my mom as somebody who they can see as their mom. Or they sort of get beyond that. They try to find out who you are sitting next to your mom.*

Most of the stories that new nurses related about their own person experiences related to having a better understanding of the client's experience and being able to apply that personal knowledge to their client care.

Several attributed their perspectives about the nursing practice environment and their entry to nursing practice to their life experiences and maturity in general. Terry stated that "*...it's awful because I'm a mature student, and if someone was 24 and that happened to them, I don't know what they would have done.*" Chantelle, who was initially educated as a special care aide before entering nursing as a student and has four children, stated that,

> *I guess that life experience that you throw into the mix, of all the knowledge that we learned in university, but you have common sense. It's another thing, that you know, you don't always have common sense when you're 18 or 20, but after you've lived a little bit, you kind of know how to put common sense into book knowledge and into a certain situation and it does give you better clinical judgement in the end.*

Dale attributed clinical judgement to past experiences:

> *...before I went into the nursing program. I'm a mature learner. I had life experiences before this. I've been working the EMS [Emergency Medical System] before going into the program. There were a lot of things I was comfortable with before I went into first year. There's the school of hard knocks and working in industry...*

The previous three new nurses were in their late twenties and thirties on entry to their nursing programs, and indicated that their commitment as students was also affected by these same life experiences. Compared to younger nursing students, more mature participants perceived that they had engaged in their educational programs differently; "*I took the program very seriously, and everything in that program, we were able to use, and I did put that to use*" (Chantelle). Some differences included being involved in student governance and serving as student representatives on various committees within and outside of the educational programs, thus enhancing their socio-political knowledge as well.

Some new nurses entered practice with the intent of gaining practice experience in a general medical or surgical unit prior to moving to higher acuity practice areas such as emergency or intensive care units. Most assumed that they needed approximately two years of general unit experience prior to moving and indicated that they did develop their organizational skills, clinical judgement, and practice knowledge, most of which they transferred to the new area of practice following an orientation period.

Practice knowledge. New nurses identified the importance of the practice knowledge that they gained from actually practicing nursing with clients and 'real' client workloads. Without negating the importance of their knowledge from their educational programs, they indicated that they used their practice knowledge more as the length of time from the educational program increased; "*...the farther away, the farther along I get, the more...you're going back to your practice than you are [to] your original program, but there's nowhere to start without that program knowledge" (Kim).* Several suggested that their practice knowledge was context-dependent, but as Jamie indicated, "*I came to terms with the fact that I still had that knowledge and would never lose that knowledge. It was just that I had to adapt to a different environment.*

The knowledge that new nurses gained from practice related more to the tacit knowledge of practice. They often described how the knowledge that they had gained allowed them to know when to respond to client situations in more timely manners, and conversely, when one did not need to respond in any concrete action. Most new nurses described how their priorities in nursing care had changed. As Chantelle indicated,

> *My priorities were more black and white back when I first started. It was based on the book knowledge that I knew and the limited experiences that I have had. Now after having practiced for a few years, ...I don't think your priorities change but you maybe are better at choosing what the*

> *priorities are....I think after time and experience, you can comfortably make those choices.*

Chantelle also found that in the first six months of practice, she didn't feel "*worthy*" enough to have confidence in her practice knowledge; *"I didn't feel that I had enough knowledge or enough of an ability to have a close relationship with the physician or the patient. I guess I had to prove to myself that I knew what I was doing, and I didn't...it took a while.*

Although new nurses were able to identify ways in which they had changed over the first two years of nursing practice, they were less articulate in enunciating the knowledge that they had learned over this period. Because so much of this knowledge is embedded in practice and is tacit in nature, not surprisingly, they were unable to articulate it clearly. The same is true for their more experienced colleagues who may have had trouble 'telling' the knowledge and were more adept at 'showing' the knowledge in practice. Lynne describes this change as

> *I felt like I had more confidence. I felt that my knowledge was increasing so when people asked me questions, I didn't always have to say, "Can I get back to you on that one. I'll have to find out for the both of us." So it just felt better with my knowledge and with working for a couple of years. The experience builds your knowledge incredibly.*

Rose stated that *"experience on the whole makes a huge, huge, huge difference. What you've seen, and it just builds on what you've got in your head, so that you've got much more of a resource in your head of things that aren't maybe so ideal, like school taught me things should go."* Their experiences might have prompted new nurses to adapt their formal knowledge to the realities of their context of practice.

That knowledge often included ways of approaching client care. Pat described the knowledge gained from a particularly vivid event with a child; *"I knew what a baby* *looks like when you can't feel the pulses and the colour goes wrong. I just learned so much from that, that later on, when we had a child that was going bad..."* However, more than just the knowledge of the symptoms noted in the child, Pat speaks of learning how to deal with emergency situations; *"I was a lot calmer and I knew, 'Okay, just call for some help, go get the crash cart, do those steps'...definitely a change in the way I approached an emergency."* Some of the needed knowledge came from orientation information addressing facts on equipment, procedures, routines, and protocols. The more important knowledge comes from learning what to do with the equipment and the protocols in order to manage situations effectively.

Many new nurses described gaining the ability to anticipate the usual progress of a client situation. Jamie described how, at about one year of practice, she was able to "*anticipate what was going to have to be done and think down the line like that. And I remember the day that I realized that I was doing that...I was so proud of myself."* Lynne described this practice knowledge as *"not so much knowing it before it happens, but kind of seeing where the client is going.* Many new nurses clearly identified this knowledge as emanating from client care and clinical practice. For many new nurses, more experienced nurses have helped them make meaning of client situations by pointing out those important aspects or providing feedback on care, but it seems that once new nurses make the connections in practice, that knowledge guides later practice more autonomously.

For many new nurses, experience helped them gain factual knowledge about the client care in their particular units, knowledge that could possibly be provided more efficaciously through formal learning sessions. Because these sessions did not occur frequently and opportunities to attend conferences were limited, many new nurses adopted the strategy of reading to gain the needed factual knowledge. As Lynne described,

> *...through lots of reading and update research, you're learning formal knowledge, and using that information and go back [to the client] and better your experiences, so past experiences always provide you with background knowledge that if something else feels more familiar, that you seem to know what step to take next because something feels familiar. All the knowledge that you are gaining and the experience makes the next experience better.*

However, as Lynne indicated, it is not factual knowledge alone that betters one's nursing care. This formal knowledge has to be integrated with the experiential knowledge gained through working with clients who are experiencing those particular issues.

Elizabeth described her knowledge gained from experience as

> *...a broader knowledge base of things now. Someone is going for an angiogram. What do you do? Like for medications? Which ones do you hold? Which ones do you give? Before, when I first started, I didn't even know what it really meant... but it's just you are always learning. ...I think it is just experience with patients, and if you don't have time [for reading], you just ask a question that is broader.*

She goes on to state, *"a lot of it is just being attentive and just figure things out for yourself, and you learn from them. You don't just let them go in and out. You sort of... "Oh, now this is how it is" and then you sort of imprint that into your mind, and so that's how it is now" (Elizabeth).* Although Elizabeth has described experiential learning informally and in her own words, she has captured the essence of the knowledge gained through experience. She has described how she has developed the knowledge of how to nurse in her particular practice setting.

This experiential knowledge has developed in many ways but has been prompted by the need to address clinical questions. In describing one's learning two and a half years into practice, Kim stated, *"I probably still read[at home] to answer those clinical questions. It just doesn't happen as often, and the longer you practice, the more of the questions you've already answered, so you don't have to this time."*

Becoming Confident

Confidence in nursing practice was both a necessary component of the development of clinical judgement and an indicator of the stage of development in the professional role. Confidence related to new nurses' feelings of competence and the belief that they could fulfill the role of registered nurse with certainty. Lack of confidence was evident in their lack of certainty and sureness in their practices and a belief that other more senior nurses provided better nursing care. In particular, all participants indicated lack of confidence in their own decision making and clinical judgement processes and described strategies they used to address their perceived deficiencies in this area. In their early months of practice, where confidence was most lacking, new nurses used questioning, clarifying, and validating to reassure themselves of the appropriateness of their judgements and decisions. With experience and opportunities to develop their confidence, new nurses described their beliefs in their own abilities to provide safe competent care and feelings of assurance and security in practice, which they often related to '*feeling comfortable in practice*'; "*When something is new to you and you're just learning, the fact is you're not at ease either. The comfort zone is coming. I can feel it, but it's not there yet*" (Lynne). Elizabeth concurred, saying, "*The more you do it, the more comfortable you are doing it, and then the fear and anxiety decrease.*"

Lacking confidence. Most new nurses indicated a lack of confidence in themselves and their own abilities as soon as they had to manage a full client load on their own. Most indicated a level of confidence in their student roles as learners, especially in the precepted senior experiences that preceded graduation; "*I developed a lot of confidence in my abilities there [in a precepted intensive care experience], because even though it wasn't something that I was really interested in personally, or that I saw myself having a career in, I was good at it and I was competent at it at the level of a senior practicum student*" (Kim). Sandy "*felt really confident actually because I'd been there, precepted, and I always went to my preceptor for help. I had felt like I'd got all the little things under control.*" In many instances, new nurses were adept in the learner role, and had acquired confidence in their abilities to learn as compared to their abilities to nurse. Some of the skills acquired in their educational programs prepared them well to enter practice and to further develop the skills needed for nursing practice. Kim indicated that she had

> *...always worked better independently, and have been self-directed. Even through school, I was self-directed and self-motivated...So I've put time into my practice to prepare me to make decisions. Reading up on medications and stuff beforehand so when those situations came up, I had prepared myself in advance, that I had the body of knowledge I needed to make the decision.*

Many new nurses saw themselves as confident people in other aspects of their lives, and were perturbed by their lack of confidence in the nursing role. Rose stated, "*I have no problem with being assertive for myself. At work, I lack a certain amount of confidence. I don't stand up for myself.*" Tony related a mistake in judgement in her personal life that she felt she had addressed confidently. She compared her reaction in that personal sphere to a similar kind of mistake in nursing practice; "*...if something of* *that equal magnitude happened at work, I'd feel like…I would just go home and cry. I would feel like quitting my job if I made a mistake like that. And I don't know what the difference is.*" Tatyana summed this perception up by saying, "*Maybe there's a difference between having a personality of confidence, and being absolutely sure about my nursing practice, and what I was doing [in practice].*" She was very unsure in early practice but had confidence that she could learn it.

Entering practice stimulated a lack of confidence; "*just relying on your [own] judgement skills, and probably my judgement skills were better than I thought they were, but at the time [on entry to practice], you really don't trust your own judgement skills very well*" (Kim). The increased level of responsibility following precepted orientations contributed to this feeling. Certain work situations also undermined their confidence in practice. Tony worked in a situation where she perceived that she needed to portray confidence even when she didn't feel confident. As a result, she related the following; "*I act confident because who wants somebody who doesn't act confident….I feel like I've been masquerading all these years, and something is bound to happen that I couldn't cope with.*" Tony goes on to state, "*I don't enjoy feeling [not confident]. I guess I would feel more confident if I knew I liked what I was doing, because then I would know that I was doing the work that I was meant to be doing.*" Tony in fact did seek other employment. Most new nurses were in situations where they felt that their inexperience and lack of confidence were accepted as normal for new nurses.

Ellen found that entering a somewhat negative and unsupportive environment for her second position diminished her confidence; "*Your confidence is greatly affected. You don't build the confidence and the support and the feeling of achievement [in the new* *area].*" Making errors in practice, particularly judgement errors, have the potential to undermine confidence; "*I know the first time you do your first med error as an RN, and that when you get that realization and that flush, and thinking about....that is just the most horrific feeling of failure*" (Dale). The impact of error can be mediated when educators or other significant people in the practice environment "*went through [the event] with me, asking exactly what actions I had taken and really affirmed that I had done everything I could*" (Kara).

Encountering unexpected or emergent situations also contributed to a loss of confidence; "*You get a weird feeling especially if something was all of a sudden over my head. I would quickly get another nurse to help me out and support me through it and show me how to do it better*" (Lynne). An inappropriately high level of responsibility in the early months of practice also undermined developing confidence; "*I was very confident as a [precepted] student but then they put me on my own, and the whole team leading business was...I didn't like because people would get mad at you...and just different responsibilities for someone who doesn't even really know how to be a nurse yet*" (Rose). Rose's lack of confidence in practice was compounded by unequal and unsatisfying relationships with other professionals particularly physicians; "*I would feel like they were such a 'deity' and that I couldn't bother them with my time.*"

Developing confidence. Most new nurses commented on the value of their precepted orientation shifts to assist them to develop their confidence in practice. Specifically, they valued having another nurse providing direction on how practice is accomplished in the specific setting and clarifying the expectations of a Graduate Nurse/Registered Nurse. Sandy stated that " *I gained a little bit more confidence in the* *stuff that I was required to do as a staff member but hadn't been required to do as a student.*" Gracie, in commenting on the practice of a peer new nurse, indicated that "*I think her level of confidence in what she doing…I think it took her longer to develop that level of confidence because she didn't have the good precepting experience that I had.*" Most participants indicated that they felt reassured that they could enact the role as it was demonstrated to them in precepted practice, although all indicated that the assumption of a client load on their own, with its increased level of responsibility, increased their stress levels and undermined their confidence.

As new nurses assumed management of client loads, the increased level of responsibility for client care prompted them to engage in decision making but also required them to be cautious. Their lack of confidence tended to peak at this point of assuming sole responsibility for the care of a group of clients. Being responsible for client care on one's own seems to be a powerful and necessary stimulus for the development of confidence and competence in practice. Kim indicated that "*I always had a lot of confidence in my decision making from day one because if I was unsure, I would check them with somebody whose judgement skills I respected, and then I would have confidence in it.*" Most new nurses used this approach frequently to increase their confidence in their judgements and readily acknowledged their own limitations in decision making. Most new nurses also indicated however, that they "*had to check with somebody else lots of times before I would have confidence in the decisions*" (Kim), thus demonstrating continued questioning of patient care situations over time and a continuing lack of confidence in their own abilities. With sufficient questioning and more knowledge of the client situation, new nurses gained sufficient confidence that they did know how to handle these situations and started imperceptibly to provide care with greater independence. This achievement was tentative however. Gracie pointed out however that confidence in practice was context-dependent and that when she encountered new situations or was moved to new areas of practice, she didn't "*feel competent in my knowledge in those areas and didn't feel confident in my experience, because I really don't have any.*"

New nurses learned nursing policies and procedures quickly and were reassured by the presence of these guidelines in manuals or on computer networks in practice. They also indicated that increased knowledge of patient conditions, treatments, and usual care increased their confidence in their skills and ability to care for clients. Knowledge was a source of confidence for new nurses. They prepared themselves through reading, attending workshops and in-services, and relevant courses. Nicky stated that "*it took probably between three and four months, [where] I stopped carrying my little med book around so much and I was much more confident.*" Pat took an ACLS course and found

> *...that [course] to really make a huge difference in my confidence, in my ability to just assess the situation. And I thought after taking it, I should have taken it a lot earlier. ...my confidence was really, really high and my assessment skills were a lot better.*

In order to develop confidence in practice, several new nurses commented on the importance of working with the same group of clients over a period of time; "*It's because you were with a different client group and you don't have the experience with them. If you can stay with the same client group for a long time, you build up a level of comfort, and a level of competence with that client group*" (Sandy). The diverse client population on the practice unit meant that Sandy didn't know the client group well until about two years into practice. Several nurses working in rural areas commented on a similar phenomenon and indicated that it took much longer for them to feel that they knew their clients. The heaviness of the rural workload made this issue even more overwhelming. Monica indicated that for her, confidence meant that she could interact with clients "*knowing what the client has going on with them, knowing what their pills are for, why they are taking them. All of that stuff combined together.*"

New nurses experienced the sense of being secure or confident in practice as they learned organizational skills and felt that they had control over the nursing situation. Managing client care in a competent manner contributed positively to new nurses' beliefs in their abilities to provide safe care. *"I feel fairly confident or competent with the patients that we get, even the most complicated patient. I'm fairly confident with them, but I still get thrown a loop. Every once in a while, I'll get thrown something that I haven't seen before"* (Lucy). Nicky reiterated this position and stated, "*More confidence…just more experience and way more confidence in dealing with situations on my own. I didn't have to run to anyone constantly and ask them questions, and make sure I was doing the right thing. I knew that I was.*" For most new nurses, a change occurred at about six months into practice, where they knew nursing practice norms and had developed their organizational skills sufficiently. As they continued to develop their skills, their confidence in practice grew and provided a basis for broader, more effective care. Jamie illustrated this transition in her level of competence and confidence;

> *I remember there being a transition between feeling like "I know what I am doing. I'm giving good nursing care. I'm meeting my requirements. I'm doing everything I'm supposed to do."…to a sense of confidence and it's not just like I'm meeting the requirements but I'm doing that plus more. You start to multi-task and you start to think ahead and you're not just so concerned about listening to bowel sounds, but while you're listening to bowel sounds, you're doing five other things at the same time.*

Senior nurses provided positive feedback on new nurses' decisions and validated new nurses' decision making through their affirmation or direct feedback that the new nurse was progressing well in professional development. When experienced nurses validated the new nurse's decision making, Gerry stated that such incidents "*just bump up the confidence level big time. So that you can take the negative stuff too…so you're not second guessing all the time…You know, you're making the right choices and just keep going.*"

The majority of new nurses indicated that the work environment was very challenging for them during their first months of nursing practice. If the work demands were not stimulating and challenging, new nurses tended not to develop as effectively; "*I felt like this [nursing unit] isn't the most challenging place, and I know that I am not really moving forward a lot*" (Tony). Although feeling confident in day-to-day practice, Tony lacked confidence in managing more complex or serious situations. The work situation simply was not challenging enough. Tony described her confidence and judgement skills to be less well developed compared to nursing peers on other units.

When nurse managers increased new nurses' levels of responsibility by assigning them to observation units or providing them with opportunities to be charge nurses, new nurses viewed the increased level of responsibility as an affirmation of their increasing competence in practice; "*I guess they felt that I was competent enough to be on that side [higher level of acuity part of the nursing unit]*" (Pat). This validation by their nursing managers increased their levels of confidence even though they were often encountering new and sometimes stressful practice situations. Dawn described this move as one of challenge; "*Here we go again because it'd been just six or seven months and I was finally* *starting to come to work without being nervous, and now it was time to change again and go into the observation unit*." Nonetheless, Dawn also indicated that "*that made me feel good. I felt okay, if my manager is trusting me from what she sees and from the feedback other people are giving, then this is something that I should be able to do*." As Terry indicated, moves were often associated with more responsibility; "*I think each area that you get moved to, you get a little more responsibility placed on you" (Terry).* Increasing levels of responsibility provided opportunities to develop confidence in more demanding situations.

Challenging confidence. Developing confidence in practice was a challenge for new nurses. Early in practice, new nurses feared errors or omissions in their care of assigned clients; "*I was scared of making a mistake, and scared of looking silly, and part of it was my pride"* (Rose). Making mistakes often reduced a new nurse's confidence in subsequent situations; "*It's important to learn from [mistakes] but I think that some people can really lose a sense of confidence in what they have done right or know in a situation"* (Kara). To avoid such occurrences, new nurses checked with more senior nurses frequently. They also used various tools such as medication texts and procedural manuals to reassure themselves of the accuracy of their decisions. The fear of errors permeated the practice of new nurses and underpinned many of their questioning interactions with other nurses. At about six months, Jamie realized that "*I could do the job and wasn't going to kill anybody*." New nurses' confidence often rose at about six months and their focus tended to change from learning to nurse ["*the job*"] to learning how to provide better nursing care.

Several incidents reduced the confidence of new nurses in their practice. Kim described a senior nurse colleague who frequently overruled Kim's practice decisions. Kim's observation was that "*sometimes there are nurses that, as long as they have more experience than you, they'll overrule your decision, no matter how long you've been there. I don't know that it was a general approach [on the unit].*" Kim stated as a new nurse when her judgement was in developmental stages, "*my decisions were overruled until a certain point with everybody*" (Kim). Pat described a different approach from a respected senior nurse who would question her in a guided critical thinking way to help her make decisions effectively rather than having to overrule her decisions, and indicated that such an approach added to her confidence in practice as she began to think independently in the same manner.

Most new nurses spoke of the issue of second guessing or lacking confidence in their own decisions. Most tended to question their own decisions early in practice or when encountering novel situations, but as Dale indicated, some new nurses never get beyond this stage of confidence and "*continue to this day to basically question everything that they do and they say 'did I do that right?' and have I done something wrong here?*'" This lack of confidence impedes their development and the quality of care that they provide. The advice several experienced nurses gave Gerry was that "*you know, you just have to stop second guessing yourself. You've just got to do it.*" Being confronted by a senior nurse who challenged Lori's approach to a specific care situation undermined her confidence and prompted her to second guess other decisions;

> *Sometimes I still find that when someone senior than me is telling me that I'm doing something wrong, I really question my own judgement when I shouldn't be. ...because I've done everything correctly so far and I know I*

> *can do this job well, but when someone like that corrects me, then I question it and am thinking back on it (Lori).*

Validation of practice decisions by senior nurses seemed to be the most important factor in instilling confidence in new nurses' practice decisions.

Having confidence in their nursing practice was a major achievement for all new nurses. After having learned the organizational skills, policies and procedures of the nursing unit, and the usual ways of doing things on the nursing unit, usually about six months into practice, new nurses slowly gained confidence in their own practice. This confidence was tentative and easily challenged by novel or emergent situations. Once the new nurses realized that they were "*able to do the job*," they were better able to manage those less frequent occurrences where they still needed help. They continued to use the same strategies of asking questions of respected senior nurses and were cautious that their questions did relate to higher levels of nursing practice and client issues. After the first six months, in situations where their questions did relate to organizational issues or procedural skills that they felt they should know, they tended to ask peers and other new nurses who they perceived would be less critical of their lack of basic knowledge of practice on that unit. Pat illustrated this tendency;

> *…is this normal, what should I expect? Say I was getting someone from out of [Intensive Care Unit] that I hadn't looked after – I would go to the senior staff and say "okay, can you tell me what this is?" Then if there was a question like 'how would you work this pump?' These are the kind [where] two younger nurses, you'd kind of go in a room together, and struggle through it type of thing. That's kind of what we would ask each other.*

At a certain point, new nurses felt stupid asking certain types of questions and often directed these questions to new nurses to protect their self-confidence and avoid letting senior nurses know about their self-perceived inappropriate lack of knowledge.

Benefiting from confidence. All new nurses saw increasing confidence in practice as a goal in early nursing practice. For all new nurses, lack of confidence was a serious and limiting factor in their practice. Lucy described the benefits of being more confident as "*more comfortable with what I was doing and what needed to be done, more efficient, more organized. You spend a lot less time looking up things which helps.*" When new nurses were more self-reliant and didn't need to rely on the assistance of their co-workers to make decisions, they were able to meet client needs in a more efficient fashion. Most new nurses indicated that with confidence in their day-to-day practice, they were more able to approach new or unexpected situations "*with less fear…and more organized in 'where do I go from here?' It was more of a working through it yourself and then if it is out of your range, then find the help*" (Lucy). Gracie described the point where she realized that she could make certain decisions on her own; "*I have been in there for six, eight months that I kind of started to decide that 'No, I can make this decision on my own. I'm confident in the fact that I can make this decision and I'm okay with that.*" Confidence in their own decision making tended to be situation-specific and wasn't a total shift to self-reliance. There was however less reliance on their more senior colleagues for day-to-day functioning and decision making.

Most new nurses indicated that their critical thinking skills improved greatly when they were confident in practice; "*feeling more confident in your role as a nurse…just the confidence that you can handle the situations that come in …and not so focused on making sure you do the right thing and focus on critical thinking through a situation*" (Ellen). Anne concurred, indicating that "*more confident because of my knowledge base and I know what my priorities are. And I do feel that my critical thinking* *has increased substantially from the first year to where I am now.*" New nurses were prompted to think critically by situations that were new, emergent, or changing such that the new nurse did not have experience or direct knowledge on which to base the decision. They needed confidence that their thinking processes were adequate to address the concerns inherent in the situation; if not, their immediate responses were to consult with more experienced nurses. In most instances, they did not have sufficient time to consult with textbooks or journal, which they often found did not address the practice issue in sufficient depth to be useful.

New nurses believed that their nursing care was better if they were more confident in practice. All new nurses felt that clients were more comfortable in the care of confident practitioners;

> *I'm not shaking when I'm doing new procedures. I think they notice a lot of confidence. Cause you want to show your clients that you know what is going on....And if a patient asks me 'Well, why do I have to do this?' If you don't have to leave the room to find the answer, then that makes you look more knowledgeable and more like you know what's going on with care, and I think that the patient really appreciates that a lot more.* (Monica).

Chantelle stated that she "*was able to relax a little bit more and provide more information for them, because I'd gotten a little bit more comfortable with the routines and the machines...I became more in tune with the patient and was able to give a little bit more to them rather than just the straight task stuff.*" Jody felt her confidence was conveyed to her clients through "*your body language [that] really says a lot. ...everybody has more faith in you and more willing to trust your judgement.*" Lynne described her nursing care as

> *...a much stronger approach to how to care for people and they're more receptive to listening to me. I found at the start, people would say, 'Do*

> *you really know about this?" and question things a lot more. A lot of it had to do with the approach that I was taking in caring for them.*

Lynne, with more experience and greater confidence in her own practice, stated that her confidence "*motivates me to do well for people to have a good experience while they're in hospital.*" Carroll also indicated that increased confidence meant that Carroll knew "*what can wait and what needs to be dealt with right now.*" Most new nurses indicated that they were more confident in advocating for their clients, as Kara indicated; "*There are times where I go above them [doctors] and say, 'Well, this needs to be done so I'm going to do it,' because it is for the sake of my patient.*" Patients receive better nursing care from confident nurses and "*feel more at ease ...and more comfortable because they're in the care of someone that knows what they're doing or someone that is confident in what they're doing*" (Lucy).

Other health professionals also have greater trust in new nurses who are confident in practice. Lynne described the changes in relationships with other staff nurses as she gained confidence;

> *I feel that my more senior staff are more comfortable having me work with them. They let me do more things, and they don't try to take over the situations anymore. When I know things are over my head, then we talk about it, and then allow other people to do the things that are more beyond me yet. So I find that it is more organized and the respect is there, confidence in each other* (Lynne).

Elizabeth felt comfortable making practice decisions and being accountable for them. She described situations where she had confidence that her decision was correct for the patient and no longer sought permission for her actions, but rather, engaged in professional discussions with physicians and others based on respect for her knowledge; "*I know the physicians well enough now. I just tell them…'I withheld so and so's* *[medication]. They weren't eating and their sugars were 4.2'. I know that they'll respect that and that they'll understand that and that it won't be detrimental to the patient. I know that*" (Elizabeth).

Being confident meant that new nurses perceived themselves as "*becom[ing] part of the health care team and you really start believing in your skills and what you can do and provide*" (Lynne). Confidence in practice was often used as an indicator for readiness for more responsibility or higher acuity care; "*I think it [her move to a higher acuity pod on the nursing unit] had a lot to do with your confidence level, if you could show other people. It's hard to explain but they would never move you anywhere until you felt you were ready to be moved. I think each area you get moved to has a little more responsibility placed on you*" (Terry). Many new nurses related experiences where their interactions with others were limited because of their own lack of confidence. Chantelle described the effect of her lack of confidence on her early relationships with physicians and patients:

> *I didn't feel that I was worthy, I guess, that I had enough knowledge or enough of the ability to have a close relationship like that with the physician or with the patient to go that far. I needed to build some confidence and have some success before I was able to delve in that deep. Now I go with what I feel, what my heart and my gut is telling me, and I guess past experiences help you make that choice. I guess I had to prove to myself that I knew what I was doing, and I didn't. It took a while.*

Being confident meant that new nurses were more able to take reasoned risks in practice. As Chantelle indicated;

> *You have to make decisions and some of those decisions are against a bit of the status quo as far as some of the rules and regulations that unions and stuff have set up. You have to take risks sometimes, as long as you have that 'do no harm' attitude and you're not out there doing something that you don't know how to do.*

Being overconfident, in the estimation of coworkers, was viewed very negatively within the work environment. Sandy's coworkers expressed the opinion that her early independent practice was indicative of overconfidence and lack of competence. They complained to her manager and withdrew their support of Sandy in practice. Sandy was very aware of this perception and lack of support, but stayed within the work setting to address the issues that were raised. One of the key means of addressing Sandy's perceived lack of competence and overconfidence was to send her to take an ACLS course, thus addressing the perception of lack of knowledge underlying Sandy's care. Sandy indicated that the increased knowledge level, along with more experience in the work setting, increased her confidence greatly as well as the confidence and trust of her coworkers. She is currently still working in the setting and has become a resource to other new nurses.

Practicing Holistically

Nursing education programs have reinforced an ideal of nursing practice that includes holistic nursing care. Most new nurses embraced the approach and acknowledged the desire to provide such care. Their circumstances as new nurses however limited their abilities to provide holistic care and created dilemmas for them. Although all expressed their difficulties in providing holistic care in early nursing practice, they also acknowledged the more pressing issue of providing safe care. Their actions in early practice were clearly focused on safe practice, a prioritization that all participants choose. Holistic care was an ideal that all participants continued to embrace but that they deferred until their practice met the more pressing demand of patient safety; they did so with acceptance of its necessity.

Knowing the patient. "I think I became a better nurse for them [clients] because I knew them better" (Nicky). New nurses identified changes in themselves as they became more experienced in practice, particularly as they worked with defined groups of clients, and later into practice, with their families. Their early focus on routines, organizational skills, and procedural tasks interfered with getting to know their clients. As they became more comfortable and confident in practice, often about six months into practice, they shifted their focus to other issues in practice, including getting to know their clients and providing individualized and holistic care. This increased knowledge of their patients contributed to the competence of new nurses in practice. It also increased their clinical judgement in practice as they became more knowledgeable about their clients and could anticipate normal courses of events in their illness and health trajectories.

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In her first six months of practice, Pat "*got really good at doing my assessments and getting used to what was normal and what wasn't.*" This focus is a necessary step in learning to identify deviations from normal progress, an ability that new nurses developed as they gained more knowledge of their client group. Darcy described this process as learning the "*early signs of things …Just the little things that you learn, and when you're there longer too, just experience you have working with the doctors and the things they tell you contribute to your knowledge.*" Elizabeth indicated that with more experience and less focus on routine aspects of care, she was more able to review charts, think about her clients, and "*think of things like that…holistically with that patient and what their history is, and what they responded to and not responded to.*" This knowledge initially focused more on physiological aspects of client care and 'knowing' the usual progress of clients with particular conditions. Most nurses stated that "*I feel like I have* *more time to look at patients' charts to really figure out what is going on with them. I have more time to look through their history and sort of....I guess to be with them more"* (Nicky). As new nurses got to 'know their patients' from a physiological and predictive perspective, they were able to intervene earlier and more effectively in client situations.

Lori stated, "*I think it was lacking a bit of confidence and getting worried about simple things [tasks] that you really don't need to. But getting too focused on 'I need to do this [get to know the person].' I think it was a lot of that...You're not so focused on sickness now. It's beyond that.*" With more experience and confidence in the nursing role, new nurses began to address broader aspects of client care, including family members; "*I would say getting more involved, seeing the patient as more in a holistic manner, focusing more on their spiritual well-being, just everything, like the whole picture*" (Lori). For new nurses, involvement of family was initially a stressful aspect of nursing practice. After new nurses had developed confidence in their roles, they were able to effectively "*find better ways to ask questions....if you see that they're open to questions and answering you about their preferences. You take advantage of that and learn from this particular family*" (Lynne). Approaching clients and their families about care issues and providing more holistic care often occurred after a year or so of practice, once new nurses started to develop their confidence in practice.

Over time Tony changed the focus of her nursing care. With developing confidence, Tony wanted to "... *get below the surface talk and to try to turn the conversation more into what's really on their minds and what's really in their...I don't want to sound corny, but what's in their heart or what's really going on with them, as opposed to the status quo conversations that people have.*" This change in focus emerged as new nurses had greater organizational skills and knowledge of practice norms in the nursing unit. With experience, new nurses were better able to "*pay attend to what the patient says and you're also making connections between what their body is doing or [they're] saying, or what's happening with them. You're also very much aware of the family dynamics....it's more of just being attuned to some of those subtle things from the person*" (Kara). New nurses acknowledged that skill in "*knowing the patient*" and being able to see the whole picture, and "*get the skills done fast,*" is characteristic of expert nursing practice (Lori). Nurses with more knowledge of their clients as people enabled nurses to "*feel a bit more empathy for them or I feel like working a little bit harder...to make them comfortable" (Chantelle).*

Once new nurses had gained a better sense of the normal progress of the conditions that their clients experienced, they were more likely to advocate for their clients based on changing client conditions. They were also more inclined to adapt care based on their increased knowledge of the person. All new nurses identified empathy and holistic care as part of the expertise of the nurses they choose as role models or mentors in practice.

Practicing holistic care. All new nurses entered practice with the expectation that holistic practice was a part of nursing;

> *"I had the holistic philosophy when I graduated but I don't think I really realized the extent of it until I got out there, and got into different situations. Pulling it together, looking at a patient from all areas is really the art of nursing...I think it's getting better...you're just learning to pull all that information together (Chantelle).*

Most new nurses expressed disappointment that they were unable to practice nursing as they idealized it in their educational programs. Their philosophical commitment had not changed, but as Kim demonstrated, their focus changed to tasks;

> *I think there were times when patients didn't receive as much of the extra kinds of care....it took me longer to get things done as compared to experienced nurses. They had more time to do those kinds of support kinds of things than I did because I was busier doing the minimal kind of care that they needed (Kim).*

As well, while doing their tasks, new nurses often had difficulty addressing client and family needs, and including important aspects of client care although they recognized that the opportunity to incorporate that care was available ;

> *You're so nervous because you know your skills aren't great and you're still a bit shaky, and you have to look everything up every step you go along, and so you forget the patient's wife that is standing there. One thing I noticed is that I tended not to talk while I was doing things ...and that's a perfect time to be doing other kinds of assessments and giving support and teaching (Jamie).*

New nurses often lacked knowledge of the resources available to support the provision of more holistic care, and were dependent on others to provide the information. As Monica indicated, new nurses also needed to gain confidence in order to engage the family in the discussions and care of clients; "*You learn to talk to them a lot more and you learn that you find a lot more about that patient when you talk to everyone in the room. You get a lot of help from family members.*" Sandy noted that initially "*it would have taken a lot longer to get to the conclusion that I get to*," and that Sandy basically allowed the client to talk until they finally provided the needed information for holistic care. With experience, Sandy's care "*is more focused. I'll pick up on something...and say, "Oh well, what about..." or "How are you feeling about that?"*" Many new nurses stated that they did not feel comfortable talking about certain issues with the family because they "*don't have the knowledge base to draw on and don't feel more comfortable talking to patients' families about what is going on…and just being confident in what you say, and your body language really says a lot*" (Jody). Pat also didn't want to involve the parents in the care of their hospitalized child because "*I was scared to talk with parents because they had lots of questions…and they were scared, and I didn't know enough to talk with them and did not feel comfortable hanging out with the parents and talking with them.*" As a result, Pat avoided contact with her clients' families early in practice. Ellen summarized the new nurses' change in approach to holistic care; "*I very much went to a patient-intense [focus] rather than at the beginning, the focus is really on yourself, where do I fit in here?*"

Working with the same client groups over time, as well as working with a limited number of client conditions increased new nurses' abilities to know their clients and provide holistic care. "*When you are there for four days in a row with the same people, you get a pretty good connection with them and their families*" (Darcy). With this knowledge of clients, new nurses gained the ability to know usual courses of events, identified unexpected or untoward events, and intervened in a more responsive and holistic manner. They also gained a better appreciation of client values and preferences and thus, were able to adapt care to clients more effectively. Those new nurses who worked with more diverse client populations often expressed difficulties in getting to know their patients as well and thus, being able to anticipate their care as effectively. Off-service clients provided challenges for new nurses as their clinical judgement was developing because they were unfamiliar with client conditions and usual outcomes.

They often perceived off-service clients as disruptive to the usual routine of client care on the unit.

New nurses continued to value holistic care and worked toward their ideals of nursing care from their educational programs. Many suggested that they perceived their nursing care of clients to be more holistic and individualized as their skill in practice and confidence increased, their anxiety decreased, and their credibility with other health care professionals increased. Several suggested that holistic care became a part of their care at minimum after a year of practice and for others, closer to two years into practice. Their focus on holistic care reflected confidence in their interactions with clients and their families and confidence that they could advocate for changes in nursing practice or client treatment. Many new nurses had selected as mentors those experienced nurses who were effective advocates for their clients. These role models may have set a practice norm and goal for these new nurses that they finally incorporated into practice when they were able.

Using Evidence in Practice

Nursing students are prepared in an educational milieu that values evidence-based nursing practice and encourages its use in clinical practice. New nurses entering practice generally have the expectation that evidence will be used to rationalize nursing care in practice. Tatyana illustrated this expectation of new nurses:

> *My program gave me background knowledge on lots of different things, which I need for where I am at, and more importantly, they drilled into us about evidence-based practice - sounds like a broken record - evidence-based practice...and how to do research and what it meant, and how to analyze that, and where to look when you needed information. Cause if you don't know how to organize your thoughts, and where to look for information, it doesn't matter that you can have all the skills or all the clinical practice...cause it's an ever-changing environment.*

Unfortunately, this ideal of nursing practice from the educational program was often not experienced as new nurses entered practice, as Terry stated, "*...and then I started working and it was just...'Well, we do it here this way because this is the way we do it.' And I was just kind of expected to go along with the flow.*" Jamie expressed a similar sentiment; "*...things we had learned in nursing school, which were current practices, weren't practiced in the clinical setting.*" Many new nurses experienced evidence-based practice environments only after they had transferred to higher acuity practice areas.

As with most new nurses, Kim stated "*I rely more on evidence-based practice when I don't have the experience to draw on. I think it's just human nature. If you have experience to draw on, you're more apt to draw on that than you are evidence, unless you're conscious of it.*" Lori acknowledged that more experienced nurses carried out their nursing care "*for a reason*" and that she also wanted to be able to say, "*I did this for a reason...I was doing it exactly the way I should, documented in a book with research behind it.*" She indicated that her reasons often related to textbook knowledge and her critical thinking skills, and that she felt she could defend her nursing actions based on that knowledge. Lori and Kara both acknowledged a broader definition of evidence in their concepts of evidence-based practice, with Lori describing experienced nurses as "*evidence collectors*" through their experience and Kara stating that "*evidence-based practice is a much broader philosophy [than just research evidence]. You're using research but you're also including intuition... judgement...experience.*"

New nurses were often surprised and disappointed at the lack of evidence-based practice in the work setting. Regardless of the nursing unit culture regarding use of evidence in practice, new nurses regarded unit policy and procedure manuals as based on evidence, and thus, "*if you've got a procedure to do, I just use that [manual] too because it's obviously been documented. This is how they want it done here, so I follow that" (Lori).* All new nurses described reference to their own personal resources such as textbooks and the Internet at home after their shifts, most often indicating that there was no time during their nursing practice to look information up. Kim stated, "*I don't really answer questions in my job with literature, because I don't have time to read it then. It's usually reading afterwards to see, "Okay, did I do it right?"...and then I know for next time, so I guess that the textbook side of it is a resource for next time than the time that it happens."* The only exception to this approach was related to medications, where all new nurses adhered to the practice of looking medications up before administration.

Even though evidence-based practice was not generally supported in practice, most new nurses maintained a commitment to the practice. In some instances, new nurses such as Tatyana and Kim were working in relatively independent practice in rural settings. Both indicated the need to "*become more resourceful at finding the information I need to make the decisions on my own"* (Kim) and "*...try to discuss it logically. This is what I think, and that's great, but what does the research say* (Tatyana)." Unfortunately, several other new nurses found nurses in practice to be negative toward the use of research in practice, a situation that confounded new nurses' actions in practice but did not dissuade them from evidence-based practice. Terry stated, "*I think they need to be asking more questions and not blindly following everything you're told. Mistakes happen that way...I think I would make research more accessible to that area."* Dale concurred, indicating that "*common practices such as using alcohol swabs when doing insulin injections on diabetic patients"*...need to be questioned based on current research.

In orientation, Rose was instructed to do a specific practice that she knew was contraindicated by research. She countered by *"trying to say my piece, because I've done all this reading and stuff on it (the practice) at school"* but realized that she was not effecting a change in practice and could only be accountable for her own practice. Quietly, she enacted a different research-supported practice. In another setting, Chantelle found the she was not able to focus on evidence-based practice until approximately six months into practice, *"as I started to come upon things there …that I started to really going and searching for more information."*

Several factors operated to support evidence-based practice in certain settings. Educators were seen as very helpful in supporting new nurses in evidence-based practice; *"She [the clinical educator] was always looking stuff up, and her knowledge and what she shared with us definitely was research-based or evidence-based" (Ellen*). New nurses saw physicians as "*really research-based, and they're often trying new things."* These same physicians supported nurses in evidence-based practice by bringing in articles on new practices. Unfortunately, Jamie found evidence-based practice "*…was very physician-dependent. I didn't see a lot of nursing research being used."* As Lucy indicated, however, seeing physicians' practices change frequently as the research evidence changed contributed to her critical approach to research evidence;

> *Whereas before, I felt if I could support anything with evidence-based practice, I had a good argument. But having seen some things in the recent past [on a busy cardiology unit], I kind of take it with a grain of salt now. I need a little bit more than just one article…we're doing this now because of such and such study.*

Having research conducted on the nursing unit also raised the profile of evidence-based practice and supported its implementation.

Several new nurses identified their own practice expertise to be at a higher level than their referent cohort of new nurses in practice, in part because of their commitment to evidence-based practice and self-study to develop their own knowledge bases:

> *I am at the same level as the other nurses [in the practice setting], and they've got 10, 15 years of experience on me. I don't think it's a time thing [for developing expertise]...if you don't keep on par [with the current research], you can't be considered an expert. You're competent and you're safe, and you're OK. Are you the best nurse you can be? I don't think so (Tatyana).*

Several indicated that "*once people get into that comfort zone [of competence], it's all about an individual kind of thing. Whether they want to go beyond that comfort zone, where they're competent and safe, and reach a higher level, or whether they are comfortable [and stay] in that zone" (Terry).* Most new nurses considered expert nurses to be *"the ones that had so much to tell, because they did the workshops, and they kept up on their reading, new information, and took advantage of workshops or education days that come into the workplace. Yeah, they definitely stayed current"* (Ellen).

Tatyana summarized the philosophy of evidence-based practice that she learned in her educational program;

> *The whole evidence-based thing drilled into us. The knowledge base that we had, and the subjects that we had to have, kind of thing. You know, my clinical experiences and my clinical preceptors...I would say that the thing that had the most impact were a couple of key professors that practiced the kind of nursing that I would like to emulate in the kind of practice that I would like to have, and clinical preceptors that also practiced a kind...challenge me to attain a certain level of practice, and use a certain thought process, when doing your practice. So it gives the basic skills. It gives you what you need to know to be out there and be OK.*

Lucy summarized new nurses' basic commitment to evidence-based practice; "*Know why you're making the decision you're making and be able to support it in one form or another."*

Needing Challenge

New nurses indicated the need to continue learning in their practice roles. Most were fully engaged in learning through reading, interactions with nurses and other health care professionals, including physicians after the first year of practice, and occasionally attending conferences or formal courses. There was however a period of time in the employment where most new nurses who stayed in the same practice setting experienced a sense of boredom, restlessness, or mild dissatisfaction. Between 18 and 24 months of practice, these new nurses indicated a need for greater challenge, which they tended to act on in the third or fourth year of practice.

All new nurses indicated that the first six months of practice was a time of intense learning associated with high levels of stress and anxiety. All indicated that at about four to six months, they perceived a sense of being able to do the job and a level of competence in carrying out day to day practices. With this turning point in their performance, many indicated that their experiences over the next six to eight months added to their practice knowledge and provided a basis for confidence and a higher level of competence. They began to feel that they were contributing to their client outcomes, and with that belief, tended to interact more so with health care professionals to achieve specific outcomes for their clients. With greater confidence, many reported becoming resources to other nurses and interacting with greater confidence with other health care professionals. During this process, the need to learn continued to be apparent in their professional development.

Many new nurses who had aspirations for practice in settings such as emergency departments or intensive care units had previously determined that they would practice one or two years on the general nursing unit prior to moving to the new setting. Most who moved to new settings described their learning on the general unit as beneficial in terms of organizational skills, confidence, and competence even though they all acknowledged that they would need to enter the new situation as a novice in that practice. Sandy stated, "*it was right back into the 'I don't know anything, I don't feel comfortable.' …a really steep learning curve*" and she indicated that she "*was starting to say I'm okay in these other areas [on the unit]. Now the challenges are in the higher acuity area.*" Jamie explained her career plans of moving to emergency as "*something that I always wanted to do*," and indicated that although she "*loved the [first] unit,*" she moved to another city approximately seventeen months into practice, and with this move, made plans to work in the emergency department of her new hospital. Regardless of the high quality of the work environment, some new nurses intended to move to the higher acuity unit, and literally nothing would interfere with their decisions to move.

A level of challenge was seen as beneficial and possibly necessary to prompt learning in the situation; "*I've been there [in a higher acuity part of the unit] ever since, which is good because I like being pushed and I don't feel unsafe but I'm learning lots and that's what I really enjoy*" (Jody). Several nurses identified the need for responsibility for patient care to prompt learning in specific situations, and when challenged by the situations, they were pressured to learn more in a shorter time. Nicky, who worked in a rural setting for two years and had just moved to a large Alberta centre, indicated that the new unit was a good learning unit but not as challenging as the previous work setting; "*Whereas it's safer here but I'm not learning as much as I did there [in the rural setting].*"

Several new nurses who had remained in the same practice setting for over two years reported feeling somewhat restless or unsettled in their work settings after about 18 to 24 months. Pat feared becoming stagnant in the practice setting;

> *I don't want to get into that condition where I'm just doing the same thing everyday, I'm bored, and not learning anything anymore...An opportunity came up and it was a new challenge and it was scary, but I can't pass this up because it's a new opportunity. It was the new challenge and the new experience and the learning.*

Elizabeth worked in the same work setting and reported being very content with her work at the first interview. At the second interview, she reported;

> *It was a year, maybe a year and a half ago [before the first interview] that I was feeling unsettled, that I needed something more, or more of a challenge or a change. I just needed a change, something different, and I couldn't really find what I needed and this [a part-time research position] just fell into my lap and that's really helped a lot and that's what I was looking for. I'm just learning so much all the time and I really enjoy that and so that's sort of helped that feeling of feeling unsettled (Elizabeth).*

Many new nurses with more than two years of experience expressed valuing of situations in which they felt they were learning and several expressed the need for change because they were not learning as much any more, as Darcy illustrated;

> *That's why I need a change. I knew like as soon as I came back...*
> *So I was learning totally new things I'd never been exposed to [in the interim job] and then coming back.....When I got back to the hospital, it was like I never left. Yeah, I knew right away that I needed a change. It's time for something different, because there wasn't that stimulation, that adrenalin, "Oh this is a new thing. I've got to look it up." You come back and it's like "oh this is the same thing"* (Darcy).

Those new nurses who moved to new practice settings, often with higher levels of acuity, had placed themselves into new learning situations and addressed their needs for continued learning. Those who stayed in the same practice setting also expressed the need to continue learning, as the slower and more subtle learning that was occurring in later practice (after two years) did not seem to satisfy these nurses' needs. Several seemed to have addressed this need through their return to graduate school, including both those who had moved to new settings and those who had remained in the same environment. Those nurses who accepted the challenge of new roles and responsibilities seemed to continue the learning process of learning and increased their satisfaction with the work environment.

Developing Leadership

Most of these new nurses were interviewed when they had between two and three years of nursing experience. Only one quarter of these new nurses had remained in the same practice setting for the full period since their entry to practice. Most were satisfied with their progress and felt they were providing good nursing care on their units, regardless of the length of time on the unit. Several mentioned in their first interviews that they were beginning to engage in leadership practices on their nursing units. In their second interviews, their self reports indicated that these leadership behaviours showed further development.

As a first indicator of clinical leadership, all new nurses made reference to becoming resources to other new nurses, indicating that this tended to happen at the earliest about a year into practice and for most, between fourteen and eighteen months into practice once they were feeling competent in practice. Before this point, they tended to answer policy, procedure, and organizational questions but referred new graduates to more experienced nurses for their nursing practice questions. The timing of this event was related to the staff mix on the nursing unit and the fact that several nurses with one year of experience were at the middle of the seniority level on their particular units, an observation that distressed them; "*...because the ratio of senior staff to new staff is outrageous and the senior staff may be people who have only been there six years. I've only been there a year and I'm being considered senior staff*" (Gerry). Their roles as resources to their less experienced colleagues involved answering questions, providing direction, and preceptoring ("buddy-ing") new nurses in the practice setting. Several new participants viewed themselves with between two and three years of practice as good preceptors because "*they have enough confidence to know what is going on...but at the same time, they know what it was like to be there [as a new nurse] ...and to watch out for those new experiences to make it an educational opportunistic learning*" (Dale).

Several new nurses provided examples that demonstrated they were assuming leadership roles in their practice settings. Because of a perceived lack of policy-based direction in the practice setting in her first few months of practice, Tony took the opportunity to write policies to address practice issues, taking these policies to the nurse manager for endorsement and implementation. Tony also perceived the manager's strong support of any leadership initiatives in the practice setting with the result that Tony approached the nurse manager with the statement, "*This is what I want to do or organize, these are the resources I'll need, and then she would just say 'Okay, we'll do that.'*" Several new nurses were responsible for organizing or participating on committees to address issues in practice, including educational committees (Elizabeth, Chantelle, Dawn) and a peer mediation committee to address a 'malignant' work environment (Jamie). Several new nurses were directly involved in improving the educational opportunities in the workplace, including the provision of more up-to-date resources, bulletin boards for publications, and binders of educational materials. Dawn, who described herself as "*someone who is always looking to find out what's going on, and how I can change my practice for the better*", indicated that she was committed to improving her own nursing practice through reading research literature, and in making those materials available to others on the unit, she was also helping others on the unit to improve their practice.

Several were involved in supporting full scope of practice for registered nurses and addressing professional practice standards. Dawn's role on the unit included greater leadership responsibilities in terms of maintaining nursing practice standards by insisting on certain levels of care; "*so I wrote up a note [in the chart] and talked to the educator, to make sure everyone knows that even though this trach is a well established trach and stuff, we need to be following a safe protocol*" (Dawn). Shortly after the first interview, Dawn presented a practice issue to the provincial meeting of the nursing union, bringing sound research to bear on the issue and encouraging her colleagues to consider the research in their deliberations. Chantelle was becoming the same type of resource on her nursing unit after about two years of practice and indicated that her motivation related to "*increasing the professionalism of nursing.*" With her commitment to professionalism, she also encountered situations in which she "*had to take risks sometimes...you have to bend the rules sometimes in certain situations, and that's where the older nurses within the [nursing unit] don't want to take chances*" (Chantelle). When initially employed in the rural hospital, Chantelle became a resource for nurses on the unit and interacted comfortably with the physician and other health care professionals. She demonstrated a commitment to continuing her learning in the rural practice setting, a practice in which her nursing colleagues had not previously embraced;

> *This was about the time that I realized it. I had to keep learning. This ongoing education, it's just so, so important and then I think once my*

> *colleagues started to see that I was doing that, and they were happy with what I knew, or I could provide information when they asked, then I think they saw it as an asset and then they started doing it themselves...Some of them have changed their practice or have started trying to figure out different ways of looking at things or different ways of doing things, but there's also those who resent the way I nurse* (Chantelle).

These new nurses began to assume leadership roles around two years into practice, seemingly when they felt confident in their own practice and when they felt accepted by the nursing staff. This change in leadership tended to happen earlier for those who had stayed in the same practice setting for the full period of employment but wasn't exclusive to that group. Only one spoke of being mentored into leadership in her initial employment setting but in moving to another city for family reasons, she moved to a unit where she had to enter a new workgroup and prove herself. After a year in the setting, she felt her leadership skills were becoming more evident and accepted by the nursing staff. Clinical leadership provided satisfaction in the nursing role and built upon these new nurses' desires to continue learning.

Entering the Nursing Practice Environment

New nurses enter a practice environment that is complex and demanding, and one with which they are somewhat familiar because of their previous clinical experiences as students. These participants entered practice in Alberta and Saskatchewan in a variety of urban and rural practice settings throughout the provinces. Although this diversity of context did influence the career trajectories of these participants, most also encountered similar issues in practice and had similar responses to their contexts.

Characteristics of supportive work environments. All new nurses indicated that they hoped for a work environment that welcomed new nurses; *"When it comes to new grads, it's so important to feel like you're welcome"* (Kara). Many had in fact chosen the specific work environment because of the supportive environment they had experienced as precepted students. These new nurses entered practice at a time when the nursing shortage was widely discussed and in some situations, was becoming a local work-life issue in their work settings. This factor undoubtedly affected some new nurses' attitudes toward the practice setting and their desires and in some instances, searches for supportive environments.

New nurses valued those work settings that welcomed them and incorporated them into the workgroup. Darcy, Dale, Carroll, and Ellen described their work environments as '*family-like*' and valued the work environment that was friendly, warm, and fun. Darcy indicated the value of a friendly work setting; "*It's just that atmosphere there. It's very seldom that you see someone that doesn't smile and say 'good morning.'...and that makes a big difference. Everyone is friendly.*" Ellen's experience in a small rural combined hospital and health centre is similar; "*...It was a wonderful experience. I miss them dearly. ...it was like a family. Very cohesive, community building, community centre, who also housed home care, physio, ...rec. therapy, I think staff like that for the community and it was wonderful. It was a wonderful working experience" (Ellen).* The nursing units on which these nurses were employed were demanding busy units but the atmosphere was collegial and helpful. New nurses often shared social events with other more experienced young nurses although this tended to happen where the staff were younger, or in larger staff complements. The supportive friendly work environment is sometimes seen as a reason to stay in a particular setting; "*I guess the reason that I have stayed there for that long is because of the...it's like home.*

It's like a family where everyone gets along really well and it's a nice place to work" (Darcy).

Entering practice was a difficult phase for all these new nurses. When asked about having time to think, Anne stated that "*No, sometimes you didn't. That's how overwhelming, that's how busy that floor was.*" In all cases, new nurses perceived that they had assumed the same workloads (in terms of numbers of clients) as did the more experienced nurses, with the rationale for this approach being "*that they were just so short staffed" (Anne).* They were very appreciative of the staff nurses who checked up on them and offered help or support, or at very busy times on the unit, reassured them that all the nurses on the unit were busy and finding their work more difficult because of that busy-ness.

Good support was interpreted as getting a proper orientation and being prepared to practice safely in a particular setting, as discussed in the section on *becoming orientated*, a criterion that new nurses felt was important in terms of patient safety. Pat felt so strongly about the importance of orientation that she advised new nurses to

> *...stick up for yourself, and if you don't feel you're ready, then you don't feel like you have enough orientation, say so. Because I know I didn't say anything because I didn't want them to think, 'Well, maybe we shouldn't have hired her or maybe she can't handle this'...really in the end, it's for the patient safety.*

Support also involved "*having those support systems in place to get you to feel the confidence in yourself as a nurse, so you will make judgement calls, good judgement calls, and good critical thinking about what you're doing with that client" (Ellen).*

The most important support system involved having supportive nurses readily available to the new nurse in the work place. All new nurses indicated that they relied heavily on their more experienced colleagues in practice to address their own practice questions and to gain confidence in their decisions. Pat "*asked a lot of questions and I don't just think that I know that it [Pat's judgement] is right and go with that. I would often check with the charge nurse and say, "Okay, this is what's happening. Do you mind checking on it?"* Others wanted the opportunity to discuss their decisions with more experienced nurses, which Gerry described as "*immeasurable. It really, really helped.*" This approach to learning how to practice was consistent among these new nurses. For those new nurses who did not have other Registered Nurses available in the practice setting, the expressed desire to work more closely with more experienced nurses was consistent.

Supportive nurses were seen as knowledgeable in practice and willing to answer questions, and as the new nurses indicated, they had many questions. Supportive nurses were generally available to new nurses although both nurses had full patient assignments, which often made questioning of other nurses and discussions of patient care decisions more difficult for the new nurse. New nurses also found other health care workers such as LPNs and unit clerks useful for learning ward policies and protocols, but not for discussion of patient care issues and Registered Nurse decision making.

Certain nursing units were also seen as good learning experiences because of the nature of the clients and the willingness of the nursing staff to support new nurses; "*...that's the nature of a general vascular nursing floor is go get a lot of new grads coming out of nursing school. It's a good broad generalized experience base*" (Jamie). Dale also valued the...

> *diversity of clients...you get everything from vascular, thoracic, abdominal surgeries. You get the full spectrum of people from the 22 year*

> *old with Crohn's to the 80s and 90s with palliative colostomies and that kind of stuff...but you have enough staff that you can deal with the level of acuity in a safe way because you have other people you can go to as a resource.*

Because new nurses were interested in learning, the client diversity was seen as an importance aspect of the work environment. However they also recognized their lack of experience in working with diverse client groups and needed their more experienced colleagues to ensure client safety and provide their experiential knowledge to new nurses.

New nurses acknowledged experienced nurses for their knowledge in nursing practice and preferred to work with those nurses who were both experienced *and* willing to help new nurses in practice. Ideal situations consisted of work groups where the new nurse was part of a workgroup consisting of several more experienced nurses. New nurses also found recent but more experienced graduates to be very helpful in practice, noting that they seemed to remember their own recent experiences entering practice, but as Anne indicated, "*they were very good to be able to ask questions but then again, you question their knowledge.*" Dale, in contrast, found the younger nurses to be "*the best ones to learn from*" in part due to their willingness to teach new nurses and their understanding of the experience of entering practice. Several new nurses were appreciative of their managers' attempts to ensure that the staffing mix of new and experienced nurses was appropriate. Because of her own experience of being supported as a new nurse, Kara now modifies the work environment to support other new nurses entering the work situation;

> *...we'd change things appropriately because we know what that's like, but I've seen how it is for some of them [new nurses], and there's been days where they've had no proper leadership. The worst of it is they're in tears, because they know that things have gone badly that day, but they haven't had the support that they needed to do well (Kara).*

Nurse educators and nursing managers were seen as important resources in the workplace. New nurses wanted to know that their managers were supportive of them in practice. This support was often evident in a nurse manager who kept in contact with the new nurses in practice and seemed interested and concerned about their progress. They were also seen as supporting new nurses by ensuring that new nurses were placed on work lines or staff groupings where there were sufficient experienced nurses available to new nurses. Most new nurses held nurse managers accountable for the climate of the workplace and indicated that if nurses were unsupportive or some cases hostile to new nurses, nurse managers should address the situation. Darcy expressed this attitude in discussing the need for teamwork on the nursing unit;

> *Everyone is everyone's patient. You work together. ...It's too slack and there needs to be more involvement... like managers. Someone coming around and following up and making sure this [teamwork] is what's getting done because it [lack of teamwork] creates a lot of resentment and most of the hostility" (Darcy).*

Only in rare instances did new nurses complain to their nurse managers about an unacceptable workplace situation involving other nurses. They did however address unacceptable physician situations with them; "*I would feel comfortable going to my manager. It (respect) plays such a big role in this hospital" (Nicky).* New nurses viewed nurse educators as important resources in the work setting, as they often supervised new nurses in procedural or certifiable skills or provided research-based evidence to support nursing practice.

New nurses valued teamwork in the workplace, and generally felt reassured by a work environment that encouraged and supported teamwork. Many such as Kara indicated that even after she felt competent in practice, she still valued a team approach to care. Terry found that a move to a new workplace involved greater teamwork in nursing practice and a more satisfying work environment; *"I think the difference is that we all work together more as a team that I was taught in school, that we work together. There isn't as much of a hierarchy as there was where I worked previously."* Initially, teamwork involved the nursing personnel alone, but with experience new nurses expected teamwork from the whole spectrum of health care professionals. New nurses generally found physicians difficult to work with and in many instances, did not engage professionally in a collegial manner until they had gained confidence in practice. With confidence, some new nurses did establish respectful learning relationships with physicians; "*Surgeons are another group of people who I've learned to pick their brains cause some of them, if you ask them a question, they'll sit down with you and they'll draw you pictures and they'll explain everything" (Jamie).* New nurses identified team involving all health professionals as an attribute of a good workplace and later in practice, sought out opportunities for inter-professional collaboration.

Because of their inexperience and the general nature of their preparation for practice, new nurses seek learning in practice. They acknowledged their foundational educational preparation and are willing to engage in learning activities that include orientation sessions, certification courses, unit in-services, and informal consultations with experienced nurses and other health care professionals. All new nurses in this study also engaged in reading at home to strengthen their knowledge base and prepare themselves for better patient care. Most indicated a need for more opportunities for formal learning sessions and better, more readily accessible learning resources in the workplace. All new nurses indicated the need for a learning environment; "*All our staff are very, very open. It's an open learning environment. If I have a question about something, one of the doctors is very willing to do that for you" (Terry).* Terry found her first workplace very unsatisfying because it very closed to learning. On her first nursing unit, nurses used the "'*I have been working here for a long time and I know what I know' approach to practice knowledge. I found a lot of the doctors were running the unit. It was probably the apathy to learning new things. It was very hard for me" (Terry).* Terry enjoyed the people she was working with but not the negative learning culture in which she was practicing. She left the unit as soon as she could, within 8 months, and transferred to another unit with a much more satisfying learning culture.

Learning in practice remains a goal for these new nurses even after they perceived themselves as competent practitioners. Kim indicated how important learning is to her professional development and practice;

> *I see a little bit of everything and there's always something new and part of that is what draws me to the job. It's not the same tasks every day so I think if you go into work and you know exactly what's going to be expected of you, everything exactly what you thought it's going to be, exactly what you're going to have to do, then you can sort of fall into that trap of doing a job and not really learning much from it. But I'm always presented with something new every day at work. There's always something that I have to problem solve or sort of adapt factors to fit, and think when you have to do that all the time, you sort of learn from your job more that you do if you just do the day-to-day normal kind of work* (Kim).

In fact, ceasing to learn often became the impetus to move to a new practice setting. Darcy had indicated great enjoyment in working in the specific nursing unit due to the social environment; Darcy knew "*right away that I needed a change. It's time for something different because there wasn't that stimulation, that adrenalin of 'Oh, this is a* *new thing that I've got to look up.'"* At the time of the second interview, Darcy had applied to the Emergency Department in the same hospital.

Many new nurses indicated that their work environments supported learning, evidence-based practice, and critical thinking in practice, often though interactions among the interprofessional teams in practice. Gerry found evidence-based practice in her first workplace, in part due to the nature of clinical practice in the setting; "*I guess they were just less time-restricted, so that when they had questions and stuff, everybody was looking in textbooks. Textbooks were always on the floor…and everything was at hand so if people weren't sure, they were checking."* Many new nurses found mentors in their workplaces whom they perceived addressed client care issues and problems in a critically thinking and evidence-based manner. New nurses attempted to emulate this thinking in their own practices, and were encouraged to do so by these mentors. Several new nurses also indicated that as they became more organized in nursing practice and fitted into the workgroup more effectively, they were more likely to engage in interprofessional collaboration and within that medium, in evidence-based practice and critical thinking. New nurses valued this level of thinking about nursing practice.

Of the twenty-five participants in this study, twenty had entered work settings that they found to be supportive and welcoming to new nurses. They did identify aspects of these nursing units that could be improved but generally felt that their workplaces supported them in learning the role of the Registered Nurse. Five new nurses had entered practice environments that they perceived as unsatisfactory. Three moved to new units within three to eight months of graduation and the other two had applied to move at the time of the first interview.

The mediating effects of mentors. All new nurses indicated that one condition that supported their integration into the workgroup, their learning in practice, and their development of clinical judgement was the presence of mentoring nurses in their workplaces. Not all new nurses claimed to have been mentored, but of those who did, all but two stated that their mentors were nurses. One non-nurse mentored new nurse worked in an interprofessional environment where she was the only nurse and the other worked in a rural setting where her colleagues were firmly entrenched in traditional practice and uninterested in evidence-based practice. As a result, the local physician mentored her. He had also agreed to be her preceptor for a nurse practitioner program she intends to take in the future. Those who indicated that they had not been mentored also stated that they did value mentoring and sought it from other nurses.

As part of the orientation program, new nurses were almost always preceptored or 'buddy-ed' in their early days of professional practice. These preceptoring nurses were assigned to this role by their nurse managers and were instrumental in assisting new nurses to learn the policies, procedures, and practice norms of the setting. Most preceptors were valued for their contributions to helping new nurses fit into the work environment. A few eventually became mentors to the new nurses. For many new nurses however, the preceptoring nurses did not become their role models in practice; they did not want to emulate their practice. New nurses were looking for mentors who could assist them in decision making, critical thinking, evidence-based practice, and holistic nursing care, as well as support them in the ongoing development of their nursing careers. The assigned preceptors did not necessarily meet these stipulations.

With the exception of one new nurse who entered a formal mentoring program in her health region, mentoring relationships developed slowly over time and were primarily dependent on a relational 'connection' between new nurses and their more senior and experienced colleagues;

> *...there's just certain connections that you make with people and maybe a personality might be more compatible, or you see someone who is trying really hard just needs that support and so then you find that someone tries to take you in a bit and just watch over you and let others know, "Hey, I think she's doing just fine," and tell about the good things...and then your confidence builds, and your team builds, because people start believing in you as well.* (Lynne).

Dawn's experience with her choice of mentor reflects a similar relational connection;

> *We had very much the same sort of working style and quite Type A [personality], and we had a lot of the same work ethic, and believed in working hard, and we both questioned a lot of things, and she liked that in me and so we got along quite well.*"

As part of this connection, many new nurses made reference to a perception that mentors cared about new nurses as persons; "*They care about you as a person...and you care about them, vice versa, whether there's ten years or thirty years difference in age. If they care about who you are, it works better...Genuine interest in my well-being, my advancing"* (Ellen). This relational element probably explains the variety of experienced nurses who can and do act as mentors to new nurses; there are various combinations of new nurses and experienced nurses that make very effective mentoring pairs.

Nine new nurses perceived that they had been mentored by one or two senior nurses in their work places, and four others identified their work places as "*mentoring environments*" (Kara) where many nurses provided mentorship to new nurses. In all but one situation, mentorships evolved informally;

> *I would seek out those nurses that I knew were receptive to teaching and because I was always open to learning new things....I wouldn't say I was singled out [for mentoring] but I would say that I was probably more receptive and probably on the outside, I seemed a better investment of their time. ...I would with go to them or they would come to me, and I think that once I built that relationship with several of the nurses, that it just kept on that way. I developed some informal mentors that way. Nothing was ever formalized. It was kind of an unspoken thing* (Jamie).

Because of the relational aspect of mentorships, most new nurses believed that informal mentor arrangements were the most reasonable approach;

> *I think that whoever is assigning [mentors to new nurses] would have to be really good at trying to match up [people], from what they know of their personality to your personality....somebody that I had chosen myself would probably be the best way to go about it* (Dawn).

Most new nurses recognized that the evolution of the mentoring relationship depended on the commitment of both partners, and acknowledged that senior nurses were not interested in mentoring new nurses who "*were slackards*" (Ellen), "*if you were slacking off by any means and you weren't willing to offer to help after you were done your work*" (Lori), or "*not interested in learning and just doing the job*" (Jamie). The attitude of new nurses influenced the mentoring behaviours of senior more experienced nurses.

Terry, the only new nurse who was assigned a mentor as part of a formal program, found that the mentor's nursing practice was very "traditional". Although respecting the assigned mentor as a "*good nurse... very nice to the patients and had patience if you needed to ask her something,*" Terry did not respect the mentor's approach to nursing practice, and in particular, her approach to learning in practice. The mentor's lack of current evidence-based practice knowledge within a work environment that supported 'traditional' practice was of enough concern to prompt Terry's transfer to another nursing unit part way through the formal mentoring program. From Terry's perspective, the fit between mentor and protégé was not good.

New nurses were attracted to those experienced nurses in the workplace who were friendly, welcoming, supportive, and encouraging to them. Darcy described her initial interactions with some senior nurses; "*…the ones that were very friendly to me when they first met. They would come up and say "Welcome" and "It's nice to have you here." …friendly and more approachable.*" Lynne indicated that you find out quickly "*who are more receptive to somebody new and a little more patient…someone who tells you things. They'll take that extra 30 seconds or a minute to explain something to you and they don't look flustered when they're doing it.*" Because of their lack of experience in the workplace, they were dependent on the willingness of other nurses to answer their questions. Experienced nurses who were easy to approach and willing to take time to answer their questions were often the nurses that these new nurses interacted with most frequently. As well, many new nurses described social interactions such as coffee breaks and slower times on night shifts during which they were able to interact on a more personal level with their senior colleagues, and when they got to know each other better; "*…we had some really good talks on nights. You get to know that person a little bit more and you feel more comfortable asking them things*" (Dawn). It is not surprising that they often developed more personal relationships that evolved into mentoring relationships with the more open and friendly senior nurses.

The relational aspect alone does not explain the basis for the mentoring relationship that new nurses developed with their senior colleagues. All new nurses indicated that they wanted mentors whose nursing practice they admired and respected.

Pat respected her mentor for "*…her nursing skills and the way she thought through things. I really admired her skills and the way she went about her nursing. She was just very good at what she did*" (Pat). Dawn described one of her mentors as

> *…an expert, a nurse expert…and she's really approachable and friendly and willing to do stuff for people, regardless of how busy she is. She's got ten patients of her own, but she has the time to do that for you and say, 'Let's sit down. Let's talk about this patient. Let me have a look at this stuff. What have you done?'* (Dawn)

New nurses recognized that the nurses that they selected as mentors reflected their aspirations for their own clinical practice. In connecting with a mentor, Kim looked for "*people who are better educated than I am [more knowledgeable], who have years of experience behind them and who are open to having questions bounced of them, can think critically about stuff, and who look at health fairly holistically.*" Others wanted nurses as mentors because of their abilities to

> *…function in a crisis. When someone is crashing or is going down, they're the people that are remaining calm and trying to get everyone through this….getting everything organized, getting the people up there that need to see the patient. They stand out in a crisis for sure* (Dawn).

Jody admired a senior nurse because of his abilities to interact therapeutically with clients and their families; "*There's a certain nurse doing his nurse practitioner [program], and whenever we work together, I just follow him around and listen to him and worship him like a god because he just knows so much and he can say amazing things to people. ...I'd be happy in any situation if he was around*" (Jody). In all instances, new nurses wanted mentors who practiced in a way that they idealized for themselves.

New nurses valued other characteristics of experienced nurses who mentored them. All new nurses respected experienced nurses who had strong knowledge bases for their practice; "*She was always looking for new experiences and always looking for* *knowledge*" (Pat) and "*The older nurses who were not afraid of change…knowledgeable, very good experience, and a long history of nursing*" (Ellen). New nurses actually considered 'seeking learning' as a characteristic of expertise in nursing practice and categorized senior nurses who continued to learn in practice as experts. "*Those ones, the ones that had so much to tell… because they did the workshops, and they went to…they kept up with their reading, new information, and took advantage of workshops or education days that came into the workplace. They definitely stayed current" (Ellen).* Kara identified a similar belief about mentors in her practice;

> *…what I consider experts, or have expertise, would be people that are lifelong learners and those are people that consider their own knowledge important but they really try to have other people around them also take responsibility for their knowledge. So part of that is their own drive to learn, and that can be just asking questions and part of that learning is standing up for what they already know. The nurses that I have most respect for…may challenge physicians for something that the physician is doing. (Kara)*

They viewed those senior nurses who remained static in their knowledge as incapable of being experts in nursing practice regardless of the length of their experience. Those nurses who did not want to learn in practice were perceived as not being evidence-based, and were often referred to pejoratively as "*traditional*" (Jamie, Darcy, Chantelle, Tatyana, Lucy, Terry, Pat); "*…there were definitely some older nurses that did not want anything different or any new information or anything like that, and so of course they're not the ones to mentor you at all*" (Ellen). These nurses were viewed very negatively;

> *They did not keep learning. They wanted their routine and how they did it, and that's how they did it, no matter what the evidence said. Because for ten years, you can do something and then the evidence changes, and you do something different" (Ellen).*

Tatyana wanted mentors who were "*…not fifty years ago… as long as they stay current and know what the research and the practices are*."

Senior nurses who had not continued to learn in practice were avoided as mentors. New nurses did not value their practice and experiential knowledge and did not approach them for discussions of decision making in practice. New nurses did not aspire to their practice, and in fact, used them as examples of nurses whose practice the new nurses did NOT want to emulate; these senior nurses were seen as negative role models. *"She's one of the nurses I look at and I think, 'Well, she doesn't really push herself [to learn]. She just does the bare minimum.' And I look at her and say, 'Well, she's alright but I don't want to be like her'* "(Jamie). This person had been Jamie's preceptor for orientation to the work setting.

New nurses valued their mentors for their contributions to the new nurses' attainment of higher levels of nursing practice. Once new nurses were orientated to the practice setting and were beginning to feel competent in practice, they often started to focus on those aspects of their mentors' care that they valued. Jamie commented on this part of the process of becoming competent; "*I looked at the nurses around me and see what characteristics I wanted to adopt and what characteristics I definitely wanted to avoid*" (Jamie). The behaviours they experienced as new nurses often influenced how they chose to practice in their later careers.

According to new nurses, effective mentors assisted their protégés to learn how to practice nursing. Most new nurses wanted and sought mentors who were knowledgeable, supported new nurses in their decision making, and assisted them to think critically about their client situations. Pat indicated that the nurse who acted as a mentor stimulated Pat to think critically; "*She challenged me the most. She would start asking me questions...she challenged me and asked me some questions that made me look at everything, and that's what I liked about her*." Frequently working in practice with the experienced nurse whom Kim valued as a mentor, Kim indicated that new nurses always "*worked in partnership*" thus facilitating decision making in a safe manner. Kim was particularly reassured to work with the mentor, because the mentor's knowledge and decision making created a safe environment in which the new nurse could practice. As well, mentoring nurses had experience and could "*see the whole situation*" and assisted the new nurses to see beyond their initially linear thinking.

New nurses also valued the holistic practice of their mentors, and used them as role models for their own practice. Most new nurses stated that they were unable to include holistic care until after they had mastered organizational skills and felt competent in practice. Several new nurses suggested that in early practice, they avoided family contact because they could not address holistic issues as part of their nursing care. They did however recognize their omissions in practice and saw their mentors as role models for complete client care including more holistic care. Their mentors often addressed the whole client situation and were effective in working with families as well as other health care professionals to address client issues. Tatyana described these mentors as "*seeing the whole thing a whole lot quicker*." Dawn described her early focus on procedural and organizational skills and lamented that task focus in patient care. She recognized that this focus was a limitation on her care that resulted in a lack of holistic care for clients. She described her mentor's influence on

> *moving beyond that [task focus]...being able to see that, and the people who can help mentor people to see that it [nursing] is more than that, and*

> *helping people to get beyond that focus. I truly believe that some nurses never get beyond that focus on tasks (Dawn).*

Mentors also assisted new nurses to integrate into the work group. In being aligned with a senior nurse as a mentor, new nurses gained status in the work group;

> *She finally took me in under her wing a bit and I found that because she liked me and was confident in letting me do thing, that sort of thing too, that kind of eased it for everybody. Because it was good enough for one of our oldest nurses to let me do stuff and enjoy working with me, then it was good enough for the rest of then as well....so I kind of drew in material from each of the nurses but I found that it was easier to fit in when you kind of had an 'in' with an experienced knowledgeable nurse – it really helped.* (Lynne).

As well, being mentored afforded a degree of protection for the new nurse, and although the new nurse still needed to learn a great deal, the fact that the mentor was interested in an association with the new nurse, albeit informal, the new nurse was more readily accepted into the workgroup;

> *That will change the way that nursing is, because if you are a beginning nurse with a mentor, it's a lot harder for people to eat you. It's almost like your big sister and you're learning from their knowledge, and stuff like that, and people won't respect you any different, but they would treat you different, because you are aligned and associated with someone different* (Tatyana).

Getting along in the workgroup was an important achievement for new nurses. Finding senior nurses who "*really liked you and then you went to them all the time* (Monica)" was a means of fitting into a work environment that was somewhat threatening and not always supportive. As Lori indicated, the new nurses needed to "*learn how to play the game*";

> *You're working with a lot of people. You've got to learn how to work the game, and that's the way....that's the biggest thing that nurses, young ones starting off, have to figure out. How can you work the game so that you're able to do everything you need for these patients but you're still able to work in a staff environment where you can get along, because that can be a big problem.* (Lori)

New nurses believed that senior nurses mentored them because they "*are willing to help you:..and she loved teaching*" (Jody), "*[gain] satisfaction from seeing someone who doesn't really know what to do, and then to have [them] a fully functioning charge RN in a critical care unit*" (Ellen), or "*They've got a very high morale for everybody enjoying their job. They like what they're doing and so I think it's fun for them to teach someone else*" (Lynne). Jamie described a mentor in her new workplace, the emergency department, as a "*mother hen to a lot of people, but to me as well. She's been working in emergency for 20-some years.*" In Jamie's first work setting, Jamie perceived the nursing care to be of high quality and the work setting very supportive of good nursing care. Jamie stated that experienced nurses in the setting were willing to preceptor and mentor in order to ensure that new nurses provided the same quality of nursing care as they provided;

> *They really cared about the patients. And they were so good with the patients, and I think they just want to brew an environment where everybody treated the patients that way, and so I think that seeking out the new nurses and trying to kind of mold them and teach them and stuff was their way of making sure that their nursing practice would be carried on* (Jamie).

New nurses valued certain behaviours of supportive experienced nurses and sought these same behaviours in the nurses they identified as their mentors. "*She was the one that took me aside and said, 'You know, you're a good nurse. Don't second guess yourself, and just trust that you are going to do the right thing*" (Jody). In part, these behaviours assisted them to integrate into the work group and reduced their stress in doing so; "*It would have de-escalated the stress because you would be able to take the time to learn...rather than have to jump in and be responsible*" (Tatyana). Many new nurses expressed the desire for a workplace that was enjoyable and satisfying; their mentors were often nurses who enjoyed nursing. Lynne described her mentor's approach to mentoring and nursing;

> *We seemed to hit it off quite nicely. She's a good knowledgeable nurse, she laughs all the time, she has fun, and I find that the people who are having fun with work are the best people to work with... you make the workplace a lot better and fun" (Lynne).*

Senior nurses' offers of help and support when new nurses were experiencing stressful working conditions in the new practice setting were often the first point of contact with a potential mentor; "*For them to come up and single you out and if you were having a rough day or if they had something they could teach you, that really made a big difference*" (Jamie).

They also valued the efforts of senior nurses to incorporate them into the social milieu; "*Some were very good about drawing me into the conversations or making sure I was doing alright…saying 'Hey, do you need any help?' or 'Do you have any questions?'*" (Sandy). Jamie, who was mentored but who also described the work environment as a mentoring culture, described senior nurses as;

> *…kind of floating in and out all the time in my experience. …they were around when we were on the floor but I remember a couple of people [senior nurses] coming up after a shift and saying, 'you know, it's not always like this. You had a really tough patient assignment. Don't worry about it.' Or during coffee breaks, they would say, "How's it going?" So it was kind of continuous support* (Jamie).

Mentoring nurses also ensured that new nurses understood the context of particular issues; *"explaining the background on conversation, because lots of times, it's things that happened before you got there, and sort of bringing you up to speed on stuff like that"* (Kim). Mentoring could also mean inviting new nurses to go on break with them, partnering with them in nursing care, and seeking learning experiences for them.

New nurses were very appreciative of senior nurses' willingness to answer their questions, provide additional information to ensure that they were aware of possible pitfalls or tips and suggestions, or offer supportive feedback that helped new nurses improve their nursing care. Good mentors seemed to have "*the ability to recognize what the learner needs…and to realize that person you're mentoring has some prior experience and just to build on that*" (Jamie). New nurses valued those nurses to whom they could direct any questions; "*No matter what question, I did not feel that it was something that I couldn't ask*" (Ellen). Other nurses were more reserved in the kinds of questions they asked of their mentors; "*I would never go to Dawn (the mentor) with a stupid question because I didn't ever want her to look at me like I was stupid. So those would be the questions I would bounce off my friends first*" (Pat). Nonetheless, mentors were seen as unconditionally accepting of the questions that new nurses asked of them.

New nurses indicated that the nurses they desired as mentors were those who were their role models in nursing practice. Kara described her experience with a nurse that she viewed as a mentor and role model;

> *I definitely viewed some RNs as 'that's what it means to be a nurse.' I'd think that to myself and when I do actions or I would be nursing, I would think, "What would they do in this situation?" or would I be doing all I could do for this person. But I don't think when I started, I had enough insight or intuition to know whether or not I was. I'd be surprised sometimes, cause I wouldn't notice something, and a more senior nurse that I looked up to would come along and they would approach something from more of what I consider the core of nursing. I mean, it's the ability to see further than a medical model and then I would be surprised and I'd be like, "Oh yeah, that's important too." And then I would be more attuned to that the next time* (Kara).

Several new nurses emphasized the importance of the mentor being a Registered Nurse as opposed to a Licensed Practical Nurse, which had occurred in several settings, and which these nurses considered inappropriate, in large part because of the need for a role model in practice. Carroll echoed the beliefs of most of the new nurses when they engaged in a mentoring relationship; "*I really respected the way she nursed.*"

They also valued those nurses as mentors who had certain characteristic ways of interacting with new nurses. Gerry valued experienced nurses who were "*non-judgemental and I think that they look at people as…they see a capacity.*" Chantelle indicated that she had a mentor who had "*complete and utter faith in me that I could do this, and we did a fabulous job [on a special project].*" Mentoring nurses or nursing units with mentoring cultures made the workplace satisfying and enjoyable for the new nurses. Lynne summed up her relationship with her mentor;

> *…she calls me 'Kid' but it's amazing how when she's on, I just feel really good and that was right from the start. I knew that it would. She would be someone that I always turn to and go and ask questions of, and she never laughs at my questions or anything. She would just tell me straight …She just took me in and was somebody that I knew that if I had a run-in with anybody, she would just kind of ease it off and make that someone was watching out for me (Lynne).*

Jody illustrated the trust that new nurses had with the experienced nurses that they had selected as mentors; "*You become comfortable with them and you can sit down and have a heart to heart [discussion], you know, a little pep talk, and it makes you feel better.*"

Having a mentor in the initial months or years of practice definitely eased the transition into practice and increased the effectiveness of learning in practice for these new nurses. For the most part, they developed mentoring relationships with those nurses whose practice they admired and wished to emulate, and who were open to such a relationship in the practice setting. These experienced senior nurses mentored new nurses in decision making and critical thinking, holistic care, evidence-based practice, and learning in practice, and were instrumental in assisting them to fit into the workplace in a satisfying manner.

Characteristics of poor environments. Although most nurses were satisfied with the work environments into which they entered practice, several factors that impeded their professional development and experiential learning were raised. As well, although these factors were detrimental to new nurses' professional development, they were often offset by other more positive and helpful factors in the same situation. No one workplace was ideal; many were very good. A few were poor.

New nurses valued the supportive network of experienced nurses who assisted them to learn how to practice nursing in a specific setting. Obviously, situations where that supportive network did not exist would cause great difficulties for the new nurses. All the new nurses in this study indicated that the experienced Registered Nurses were very helpful in assisting them to integrate into the practice setting. In some instances, experienced nurses referred new nurses to procedure manuals rather than answering their questions directly, which caused some difficulties for these new nurses, often because they needed answers immediately and didn't have time to look information up.

Some new nurses had opportunities to experience different practice settings and identified those settings that were particularly problematic for new nurses, especially if they had had positive experiences in their initial work settings. Jamie identified the second employment setting as unsupportive and somewhat hostile. Jamie described this climate as an…

> *…environment of competition, of back stabbing, of professional division. There was no mentoring. There were people that were having personal problems of their own and also with each other. It was negative energy all over the place. And I didn't really bother with people at first but when*

> *I got more comfortable and could see what was going on around me, it was energy- draining to go to work. There was no mentoring and there was an attitude of everyone for themselves. There were a lot of people who were burnt out…People talked about people and it wasn't a great place to work. Emotionally, I just wanted to go to work, do my job, and go home. And I really struggled to maintain my own professional standards, the way I wanted to treat my patients and the way I wanted to spend time with them. I really struggled to remove myself from the emotion of that unit and still care for the patients the way that I wanted to.*

Several nurses identified similar work environments, often as their second employment settings where they had the opportunity to compare the workplace to another, especially if the first workplace had been a positive experience. Less serious workplace issues but of concern nonetheless were situations involving LPN-RN scope of practice issues, occasional lack of willingness to offer help to new nurses, and a staff complement that had too many new nurses or conversely and more importantly, too few experienced nurses.

Terry, Chantelle, Jamie, Carroll, and Rose were somewhat negative toward RN colleagues whom they felt weren't thinking critically about their nursing practice or using appropriate research evidence in practice. All supported critical thinking in practice and as Chantelle said,

> *One thing that stood out for me and that I think is foreign to some of the older nurses is critical thinking and decision making. That was ground breaking for me and once I figured out what it was and how to use it, then I was able to go into the practice setting and I was confident in my knowledge.*

This approach to nursing practice in some instances created problems for new nurses.

> *I think I proved myself in some areas, but in other areas, I was more threatening to them. I was a bit more independent. I kept learning new stuff and I think sometimes my knowledge in certain areas intimidated them, especially since they were 20 years older than me and had been nursing for 30 years (Chantelle).*

Terry actually left a formal mentorship program in an initial employment setting due to a perception that nurses in the setting were not interested in either critical thinking or the use of evidence in practice. Terry indicated that "*…it was probably the apathy towards learning new things I think. It was very hard for me. Where I would ask, 'Well, why do we do it that way?" or "Why does this happen?" I had someone tell me one day, "Well, that is not your job so you don't need to worry about it."* It is important to note that many new nurses didn't feel they themselves used critical thinking in practice until they had gained comfort in the practice setting and felt that they could meet the day-to-day demands of nursing practice in that specific setting. In some instances, the use of research knowledge in practice was actively discouraged, a situation that new nurses found intolerable. In other situations, critical thinking and evidence-based practice were not modeled in nursing practice. Nicky felt that some of the older nurses that she worked with in a rural setting *"weren't enjoying nursing at all. They were really bitter about nursing. They wanted to retire. They're ready to retire. They were so frustrated with the situation, with the politics of the hospital. They just wanted to go there, put in their hours, and go home."* This situation was not conducive to a new nurse learning how to practice with critical thinking and evidence in practice.

The lack of teamwork with physicians in particular was of great concern to most new nurses. In the initial orientation period, new nurses often lacked confidence to approach physicians or to discuss patient care issues with them. In many situations, new nurses were often ignored in the care of patients;

> *One physician who has probably been there for 30 years…. Initially, I think the relationship was sort of hard because he would only sort of say something to you if he had to say something, and other than that he would only come… when he wanted to come, and that doesn't mean that he*

> *would round on every patient. He wouldn't necessarily answer pages, those sort of thing (Elizabeth).*

New nurses felt powerless to confront what Elizabeth viewed as "*poor medical care*". This perception was often reinforced by negative interactions with physicians; "*The doctors were way above everybody, and they could come in and they could get mad at you, and yell at you in front of people, and then just leave. No one ever did anything about it (Nicky).*

Initially, new nurses tended to avoid physicians especially if the nursing unit used a 'charge nurse' approach.

> *I never really had a problem with them, just because I never brought any issues up. Like some of the other nurses would really push them, but I just kind of I did my job, and let them go. But it was just a matter of management would let them get away with stuff and no one was really policing them, and so they sort of ran the show, they thought.... But yeah, I didn't ever feel comfortable really talking to them about different things but what was going on with the patients* (Nicky).

Once new nurses had gained experience in practice, and were less fearful of interactions with physicians, they were often very upset with their relationships with physicians;

> *I think in a different environment, I might have...more of a team approach. But I really don't feel like I'm a team with the physicians at times, or seldom. It's more of 'I'm a tool'. I feel like I'm a tool for the surgeons to act or perform actions on patients. You know, they write an order, they expect me to do it. Well, I'm controlled by those rulings, and of course, it's important to have physicians involved, but I would like to see it more of a team approach. Like actually have a conference about a patient, discuss different possibilities* (Kara).

In most situations, physicians did not demonstrate respectful interactions with new nurses with the result that most new nurses were intimidated to approach them. Many new nurses had to establish respectful relationships with physicians, often taking the initiative in suggesting patient care alternatives. Most new nurses did not have the confidence to approach physicians until well into practice, often up to a year or more into practice. Some never did, and only approached physicians for orders for patient treatment, never discussing patient progress or care with them. Jamie illustrated how her relationship with a specific surgeon changed only after a confrontation over patient care;

> *One surgeon in particular was very..... I was terrified of him when I started. He was incredibly intimidating and I called him on something [patient care issue] one day and I couldn't believe I did it. No one else could believe that I did it. And after that, I had him wrapped around my finger. He learned that he couldn't kind of boss me around like he could some of the other nurses. After actually, now that I think about it, he would take time to teach me things after he realized that I really wanted to learn. ... I think I demanded a lot more respect from the surgeons (Jamie).*

New nurses were very critical of situations in which their nurse managers were either unsupportive or uninvolved in the patient care of the unit. Chantelle indicated that she had personal conflict with her nurse manager in her second place of employment [a rural hospital] and that she felt this nurse manager was "*watching over me and I was a bit afraid that she was actually going to do something that would hurt me as a nurse*." In this setting, Chantelle wanted a nurse manager who was "*more involved in the everyday working environment instead of just doing paperwork. It seems that they can't be involved in anything more than paper work, but I've been with managers who do both*." In particular, Chantelle believed that the nurse manager should be more involved in dealing with setting standards of practice; "*The nurses tend to not want to try anything different or improve the way that we do things. They want to just do it the way it's always been done and that hasn't changed. More than anything, I'd like to change the attitude to embrace individuality and change (Chantelle).*"

The lack of learning opportunities in many work settings was probably the most frequent complaint of most new nurses. New nurses acknowledged the importance of the learning network that consisted of their senior nurse colleagues and other professionals, and were very appreciative of all that they learned from these experienced colleagues. They also wanted organized learning opportunities to provide formal research-based knowledge on which to base their care. Those new nurses who had attended formal sessions such as week long orientation classroom sessions dealing with client conditions and treatments or ACLS courses indicated that the knowledge they gained contributed very effectively to their confidence and competence. Many new nurses such as Terry indicated that in eight months on a general surgical unit, there were no in-service offerings and that the only learning opportunities related to what the new nurse learned at home. Such an approach negated the theoretical and research basis for nursing care and suggested that only experiential knowledge was important in practice.

Several new nurses experienced situations where their assigned level of responsibility was beyond their professional capabilities. Several nurses in rural settings and settings where nurses worked independently found this situation to be particularly problematic for them, especially since they didn't have experienced nurses available for consultation and advice. These nurses were particularly fearful and often felt overwhelmed in practice. Some nurses developed interprofessional support networks among physicians, LPNs, and emergency personnel to address the lacking of nursing support. Other nurses in these settings practiced without support, and often felt that their clinical judgement was lacking or slower to develop as compared to their more supported colleagues. Several new nurses left these work settings. Nurses in urban settings where there was sufficient support often requested additional orientation and 'buddy' days to better prepare them for these responsibilities. As Pat indicated,

> *...it actually happened with that transfer from the dirty side to the clean side [to the areas with higher acuity clients]. A lot of them [new nurses] would quit. It was very overwhelming, and they shouldn't have done that to us...People should have had buddy days again.*

Unsafe working conditions for new nurses. In some instances, new nurses felt they were practicing in unsafe working conditions or practicing unsafely. Kim stated that in the first six months in practice, the more experienced nurses left Kim alone with a unit of patients. Although Kim had assistance within a phone call, the situation was "*potentially unsafe*." Tony had a similar work environment where relatively independent practice was expected. Tony worked independently on a unit with a wide diversity of clients. Within that practice, Tony felt that there was a culture of non-reporting of errors and a sense of competition;

> *I find errors all the time that people have made...Most of the ones I've found, they've been small things, but they should be reported. If they track it and find it's really a systems problem, and if they changed it, people wouldn't make that mistake again. I find people are quite cavalier about errors* (Tony).

Tony indicated that because of the errors in the work place, she did not feel safe in her practice. As a result, Tony perceived a self focus and a fear of errors that have continued in practice well beyond the usual time frame; "*I wish I could say that it [keeping standards up] was professionalism or a love of nursing, but it is more just liability. Like a beginner or new nurse, I never really went beyond that. I know that if I can't feel safe, I know I can't really take that next step" (Tony).* As well practicing too independently, Tony indicated a sense that in that practice setting, admitting one's lack of knowledge was viewed negatively, thus increasing the lack of patient safety in the situation. At the time of the second interview, Tony had accepted another nursing position in a different setting.

Several new nurses indicated that the staff complement on a particular unit may create situations that are less safe for the new nurse. In particular, several new nurses indicated that when a unit has a large number of new nurses, nursing standards and practice knowledge may not be as high. As these new nurses became more experienced with between two and four years of practice, they themselves encountered difficulties in assisting new nurses when there were 'too many' on a single shift. Many nurse managers were able to spread new nurses over various shifts or work lines and thus, increase the expertise of the workgroup for a particular shift. Nonetheless, some of these participants indicated a sense that standards of practice were being negatively affected on the nursing unit when the staffing mix had too many new nurses or not enough experienced nurses.

New nurses in rural hospital practice. Four new nurses in this study worked in a rural hospital setting. For two new nurses, the rural setting was the first employment setting, and for the other two participants, the rural unit was the second place of employment following a year in urban settings. The rural setting challenged the skills of the new nurse and created unique issues that these new nurses had to address.

Rural hospitals are quite unique as were all the settings that these new nurses practiced within. One centre was a ten bed facility while the other centres were somewhat larger, one being a twelve bed hospital with a thirty-six bed long term care facility integrated. Nonetheless, these new nurses generally practiced independently in their settings, often assisted by an LPN. As well, these new nurses were often expected to provide nursing service in the Emergency Department on evening and night shifts.

Learning to practice as a nurse in rural settings was challenging. One new nurse was not orientated to the practice setting and had a patient assignment on her first day in the setting; "*I was sort of just thrust on the ward…that was sort of the mentality there. It was as if they just wanted a body to fill a position" (Nicky).* Another had a month long orientation with another RN in the practice setting. For two new nurses, the rural setting was the second employment settings and orientation was much easier. In all cases, the resources for learning in the rural settings were limited, new nurses did not have direct access to other RNs during their daily practice, their nursing care was not overseen by more experienced RNs, and they did not have access to clinical educators.

For all new nurses in rural settings, the main difficulty related to providing nursing care autonomously. Because these new nurses were the only nurses on the units once their orientations had been completed, they accepted a great deal of responsibility for client care, often without the ability to confer with other more experienced RNs and rarely had feedback on their practice decisions. "*I had so much more responsibility than they [new graduates in urban hospitals] did" (Nicky).* This level of responsibility did stimulate learning in nursing practice but it was associated with high anxiety levels. Although desperately wanting to get out of the small hospital work setting, Nicky felt that "*I am a better nurse now because of it.*" Tatyana stated that she learned a great deal but that she was a "*generalist, so I know a lot about a lot, but I'm not an expert in any one field.*" Both felt that the level of responsibility that they had assumed had also been very beneficial in helping them learn to practice nursing effectively, although at the time, both perceived it as somewhat overwhelming.

Because of the more autonomous practice and the wide diversity of client issues, conditions, and treatments, rural practice provided opportunities for greater self-direction, more professional learning, more opportunities for inter-professional collaboration, and full-scope practice of the registered nurse role. In three of the practice settings, such autonomy was encouraged and supported by both nursing staff and physicians while in the fourth, it was actively discouraged. This difference may be a reflection of individual personalities of the participants or of the relationship of the new nurses with the physicians in the settings. Although such autonomous practice was satisfying to experienced nurses, new nurses often had a great deal of difficulty learning to practice nursing while being challenged to expand the nursing role into more interprofessional spheres. All new nurses were in charge positions shortly after beginning their employment, often with LPNs for assistance. With the increased level of responsibility and the lack of support in the environment, Nicky was fearful of professional repercussions; *"I always felt in [small town], if anything went wrong, my license could be on the line just because I didn't have the education and the backing [of the employer]" (Nicky).*

This array of expectations of rural nurses provided a continuous learning environment in which new nurses could develop, but a limited number of resources to support that learning; *"You don't really get a comfort zone. Sometimes you think you might have a handle on something, and something new comes in. And you can't possibly know everything about everything" (Tatyana).* Chantelle, Tatyana, and Ellen very quickly developed learning relationships with physicians, while Nicky had a continuing oppressive relationship with a physician who was feared by most of the nurses in that practice setting. Nicky's learning in practice was almost exclusively from experience with clients, feedback of other nurses at shift change, questions of other nurses on other units, interactions with LPNs in the practice setting, and personal textbooks. While the others in rural practice used these same types of resources, their associations with physicians have increased their rate of learning and their scope of practice. None had access to a nurse educator and in all cases, nurse managers were distant from client situations.

Several participants commented on the high level of experiential knowledge of their nurse colleagues in rural settings, but also were concerned about perceived resistance to change among those same colleagues. Chantelle commented;

> *...in terms of the nuts and bolts nursing environment, I don't think it has changed for 30 years. It's unfortunately not that receptive to new people with new knowledge or people overly excited about what they're doing. On day shifts, there is more than one nurse but they tend not to want to try anything different or improve the way that we do things. They want to just do it the way it's always been done and that hasn't changed.*

Nicky was working in a larger rural hospital and had a client load of sixteen patients with an LPN. This larger client load often meant that Nicky was busy completing tasks, procedures, and treatments, and was less involved in discussion of, or initiation of, client care. Nonetheless, Nicky also indicated that "*a lot of the nurses that had been there for that long, or as long as most of them had been...they weren't enjoying nursing at all. They were really bitter about nursing and wanted to retire.*" In most instances, new nurses in rural practice did not have mentors in the practice setting, although one new nurse did attempt to emulate her director of nursing in decision making.

Nurses in rural practice live within the communities in which they practice professionally. As such, they often have personal as well as professional relationships with their clients as Tatyana commented,

> *I don't have the luxury of anonymity with my patients....I've now been there for two years, so the babies that were born and we had for jaundice, I now get to see as two years olds as coughs, colds, pimples, dimples kind of thing, so I've got more of a relationship with the mothers. They will come and ask me or call me on the phone at the hospital, and they'll say, " Ok, you know so-and-so, and this is what's going on".... It's more personal and it's not so...the clinical is still there, but I have a history that I am going on. ...Emotionally, I would never have been someone to say that I would take my work home with me, and I've still..., but it's changed my interactions with other people. For sure. When you're home and you wake up in the middle of the night because you're wondering if that person was OK or if you did everything OK ...it's impacting on your dreams. (Tatyana)*

This situation was worse for Chantelle who grew up in the community in which she practiced. As a result, these new nurses were aware of outcomes of care over the long term and had the opportunities to change their practices based on these outcomes. They tend to know their patients better.

Nicky has since left the rural practice setting and was relieved to be in a setting that was perceived as "*safer in which to practice*," but still believed that the amount of experiential knowledge gained in the rural setting is greater than that of new nurses on more specialized care units. Tatyana, Chantelle, and Ellen continued to practice in rural settings where their nursing practice was described as full scope of the registered nurse role. Chantelle indicated that

> *in certain circumstances, I will change the rules only if I'm confident that I know what I'm doing, only if I'm confident that the physician backs me, only if I'm confident that it's the right thing to do, and when it's documented properly.*

In doing so, Chantelle was aware that she was taking some risk in her professional practice but perceived that she had the support of the physicians to do so. She was concerned about her RN colleagues' reactions to her practice as they were more dependent on the physician and less willing to function in a more autonomous manner.

> *They were getting heck [from the physicians] because they were calling for every little thing, and they did that 20 years ago, but we don't do that anymore. For one thing, you don't have enough doctors to call, and for another thing, you don't always have time…it takes the doctor a few minutes to get there. And in a small town emergency department, it's endless what comes in during the night* (Chantelle)

Those new nurses who enter practice in rural settings has the opportunities to develop their professional practice in much different ways than did those new nurses who enter practice in larger urban facilities. Their development however was often associated with greater levels of anxiety.

Detrimental effects of 'ward bullies'. When new nurses enter practice, they often fear those nurses who 'eat their young.' The new nurses in this study indicated that although they encountered a few nurses who were less helpful or at worst, harassing, they stated that most nurses were welcoming and supportive. Although nurses who harassed new nurses were few in number, their effect was significant on the new nurses in this study.

New nurses described 'ward bullies' as more experienced nurses who were basically negative people in the work environment; "*people who are always negative, always bitter, always just burnt out. You tend to know who those people are right away because they really identify themselves*" (Jamie). This negativism also extends to patients in some cases; "*She was negative to everyone and mean to the patients" (Terry).* New nurses explained the behaviour of these nurses as "*trying to really show she was boss"*

(Ellen), *"uptight, hyper all the time, and they were overwhelmed themselves with the amount of work"* (Nicky), *"trying to take over your role"* (Darcy), *"one of these 'eat you alive' kind of people"* (Terry), *"prove to them that you're good enough, that you're strong enough to be there"* (Lynne), *"the 'I don't have time to deal with you' nurse* (Dale), and *"the elderly nursing battleaxe"* (Dale).

Kara explained the actions of some negative nurses on her nursing unit with the comment that

> *...some people are really...especially on my ward now, are just toxic when a new grad starts because they just view it as they're [the new nurse] taking over another senior position that another person just left and now we're replaced with a grad nurse. They feel like they [new nurses] don't know anything.*

Some new nurses explained the conflict on the basis of the RN-LPN dispute or the diploma-degree dispute among registered nurses. Several indicated that senior nurses with many years of experience seemed to resent the new nurse with a baccalaureate and were intent on pointing out their deficiencies in early practice.

Some new nurses experienced senior nurses criticizing their nursing actions in front of other nurses, refusing to help the new nurse, scrutinizing the new nurse's practice for errors or omissions, declaring the new nurse's practice unsafe or incorrect, negating the new nurse's decisions in a hurtful manner, or being verbally abusive toward new nurses. These actions were hurtful to new nurses who generally lacked confidence in their own practice and were vulnerable to negative comments from senior nurses.

A positive aspect of this negative situation was the action of other senior nurses in the practice setting who basically tried to protect the new nurses. Following a confrontation by a senior staff member, Sandy was told, *"It's OK. She's just like that and* *you're just going to have to suck it up and ignore her because everyone else has to. After that, I had a little bit more rapport with a couple of other nurses.*" Other nurses responded to a verbal attack on Ellen with the statement to the abuser that "*that's not the way we talk around here. That's not supportive.*" Ellen indicated that other nurses confronted the abuser several times, and then eventually "*there were write-ups to the manager and lots of documented things. But it didn't change her ways. She was a fairly new nurse, only 20-something years old.*" Not all incidents of abusive behaviour were confronted, as Tatyana indicated; "*Some of the crazy stuff people are allowed to get away with. Everyone knows it is happening. And nobody is willing to say, 'By the way, it's not appropriate.'*" Although almost all new nurses could relate incidents of hostility or abuse by other nurses in the workplace, in most instances the abusers were single individuals who other senior nurses viewed negatively in the workplace.

Even though the incidents were isolated and viewed negatively by the rest of the nursing staff, they did have an effect on the practice of new nurses. Kim found that

> *...it maybe made me more conscious when I was making clinical decisions that I'd better be able to justify it because I might have to. ...if you're questioned all the time at work, it adds more anxiety to making those decisions, not so much in deciding what decision to make but in that every time you make a decision, you have to be prepared to be scrutinized for having made that.*

Jody found that when she worked with the nurse who abused her, she "*fell apart, like everything I did. You become flustered and you second guess yourself, and when you start second guessing yourself, your practice totally falls apart, and the day just does not go right.* Others tried to avoid the abusing nurse, "*I let her do her thing and I spend as much time away from her as possible*" (Sandy) and others indicated that they did not approach the offending nurse for any help, which in some instances meant that they had to be self-reliant in practice. Rose indicated that her vulnerability to a ward bully was greater when she was unhappy in her practice. When she moved to another setting in which she had greater job satisfaction, a ward bully's actions were less damaging to her. Nonetheless, Rose indicated that

> *...she's very sarcastic...She'd make fun of me in front of patients and say, 'well, why didn't you do this?' in front of patients. Even if it was something I should have done, you want your patient to have some degree of confidence in you. ...I even had a patient ask me one time, "Why does she hate you so much?"*

Several new nurses indicated that this abuse was sufficient to make them consider leaving the nursing unit, and Rose's move to another unit was in fact prompted by her poor relationship with an LPN who abused her in practice. Lori indicated a high level of vulnerability in the early months of practice and stated,

> *Two years ago, I would have felt like quitting. Nurses don't realize this, but on new nurses, they can really affect them. They can be whether or not you're going to end up staying in this job or quitting. And I don't think they realize how much of an impact they have on people [new nurses] that are really genuinely trying....you can destroy them.*

Although these incidents were limited and most new nurses identified only single nurses who had been abusive on their units, the impact of these incidents was sufficient to interfere with their clinical decision making and development of confidence. It is reassuring that many of the experienced nurses on the unit were supportive of the new nurses and confronted the abusers on their behaviour. In a few situations, managers also reprimanded the abusive nurses for their behaviour and in one case initiated disciplinary action.

Reflections on their Educational Programs

These new nurses were graduates of four different baccalaureate nursing programs in late 2000 or 2001. They were asked to describe the ways in which their respective educational programs had prepared them to enter nursing practice and facilitate their development of clinical judgement in nursing practice. Although many had suggestions for improvement of the student experience, all expressed confidence in their programs to prepare effective nurses and were positive in their comments about their nursing programs. Most also expressed the belief that they were responsible for their own learning, as Gracie indicated: "*...you get what you take out of it [the program]. So you grab as many experiences as you can get... I think I had good experiences and that was something for me to draw on.*" Chantelle related her commitment to learning as a student to her maturity while in the program; "*I was a mature student and maybe did have a bit more confidence, and I got everything out of the program that I possibly could.*"

Foundational Knowledge

All new nurses expressed the belief that their educational programs had provided the foundational knowledge that they used in practice, and as practicing nurses, they expressed their valuing of this knowledge; "*I feel good about myself because of the values that the program gave me*" (Rose). Kim described that knowledge as foundational knowledge as "*sort of the bottom of the pyramid because that's what I started with, and then everything was build on top of that, so I don't think it matters what I learn in my practice, there's always some root of it in your base program*" (Kim). Many expressed the belief that "*the actual courses in the program teach you the knowledge to give you a* *wide base of knowledge*" (Lynne) and a "*holistic approach*" (Gracie, Carroll, Pat, Dawn, Darcy, Tatyana). Several commented on the need for more science courses such as Anatomy and Physiology, Pharmacology, and Pathology to support their nursing and also suggested that such courses could be offered on an ongoing basis throughout the program rather than just at the start. Almost every new nurse commented on the value of the assessment courses in their programs and the benefit of that knowledge to their current practices. "*Courses that are probably the best would be physical assessment... that would really help your job here [on surgery]*" (Lori).

Many expressed the belief that a degree in nursing should be a necessary requirement for entry to practice. Dawn stated that through the university nursing education program, one…

> *starts to look at the entire person and everything that you have to do to that person. …the kind of education that a university gives you is how to start to look at things in the whole and start to question things yourself. They [some nurses] continue to see it [nursing] as tasks, and I don't think you can understand the process of nursing and begin to see how great nursing is unless you can move beyond that. I'm starting to see the importance of the process and why SRNA believes that we needed to go from diploma to degree (Dawn).*

These graduates to a person indicated their satisfaction with having obtained their nursing education through a university program, although they also acknowledged the ongoing diploma-degree controversy in their practice settings. Most chose to avoid discussions of the issue in practice, indicating that it will eventually go away. They also indicated their understanding of their diploma-prepared colleagues' resentment of new nurses on entry to practice and felt they had to prove themselves in practice. They nonetheless expressed admiration for the practice expertise of many of their diploma-prepared colleagues.

Almost all indicated that during the program, they had concerns that some courses were irrelevant to nursing practice. They also indicated that as experienced nurses in practice, they now acknowledged the importance of the questionable courses, indicating that…

> *…the classes that at the time, I thought 'What a bunch of crap.' This is ridiculous. What am I doing here? I can't believe I paid money for this. They're the classes that have come to be things that I use regularly in terms of interpersonal communication and reflection and that type of thing. But they are important and interpersonal communication is a big part of our job, a huge part of our job*" (Gracie).

Carroll also illustrated this student concern with the statement, "*…all the classes that we thought, 'Why are we taking this?' Well, they all really matter now, and those are the things, the community stuff and the primary health care stuff, and all that stuff is in the back of my mind.*" For the most part, new nurses expressed confidence that the content of the nursing courses was in fact relevant to their practice and in particular, provided a foundation for practice as nurses. This perception existed in spite of new nurses' feelings that others expected them to 'know more';

> *Yeah, I think they I think at first they thought that I should know more…. it's a long time ago. [laughter] …but then they kind of thought, you know, "Well, she's only a grad nurse. Maybe we should be helping her out or something." But yeah, I don't know, it was hard at first. I felt like I should know more. I like I felt like I should know more of the stuff myself, so it was hard to ask questions, but I just learnt to do it* (Nicky).

Holistic Care

All of these new nurses commented on their focus on holistic nursing, which they attributed directly to their educational programs.

> *I think the knowledge base that we learned in the program, I think it was it was fairly holistic. Now I don't think holistic care is something that you are able to provide when you first start nursing, because you just can't. You can't get it all together, and there's lots of days that I know that I*

> *didn't do a very good job. But I mean, it's just something that you get better at with time and experience, but I think the nursing program provided the fundamentals that you could build on.* (Gracie).

In fact, many indicated that holistic nursing care was not a characteristic of the culture of their nursing units although they often sought out as mentors those senior nurses who exhibited holistic care in those practice settings. Many commented on the wider perspective that a primary health care approach to nursing supported in their care although they were all initially working in acute care environments. All new nurses indicated that initially, they were unable to provide nursing care in a holistic manner and regretted this lack in their care. With more experience and better organizational skills, all new nurses described their attempts to integrate more holistic approaches to care. Once new nurses had achieved this level of competence, they were also more appreciative of specific aspects of their programs, including courses in communication and interpersonal relationships, teaching, primary health care, and family theory. Many had expressed a lack of appreciation for these same courses as nursing students.

Critical Thinking

New nurses acknowledged critical thinking as a desired outcome of their nursing education programs, and all believed that their programs had prepared them to do so. As Lori indicated, "*You get a wider scope of things and you learn to question things. I'd say that's the best thing that I ever learned is to question, always question things, never doubt.*"

> *I think the program that I took taught me how to think critically, and how to reason those things out, and then you can apply that to any situation. I think it did a good job of teaching me to gather the information I need to make decisions, and how to problem solve through those decisions…to come to a judgement. I think those [critical thinking skills] are more important than any other skill because the other skills, you forget (Kim).*

Many new nurses related their critical thinking skills to the need for evidence-based practice, and saw critical thinking as the means to that level of practice;

> *...evidence-based practice and how to do research and what it meant, and how to analyze that and where to look when you needed information. 'Cause if you don't know how to organize your thoughts, and where to look for information, it doesn't matter that you have all the skills or the clinical practice or whatever. You need to know where to go for that kind of stuff, cause it's an ever changing environment* (Tatyana).

Darcy made the point that critical thinking in practice is not the logical systematic process taught in the educational program, and Gracie stated that the program did not teach her to be a critical thinker, but rather, supported her pre-existing critical thinking in her experience as a nursing student. All new nurses saw self-directed learning and critical thinking as intended outcomes of their educational programs and believed that they gained skills in this area.

Preferred Teaching Methodologies

As one might expect, preferred teaching methodologies varied among these learners. Many suggested that the most effective means of learning content in a way that was most useful to their practice as registered nurses was through case studies, scenarios, or problem-based learning (PBL); "*You really got to know all the aspects of this patient's care really well...it was good because you got to discuss it out. You got to learn about where those lines of judgement go in the care of this patient...where is your most important thing*" (Sandy). Darcy, who was not in a PBL curriculum, found the discussion situations most useful; "*there'd be a topic and you'd have all the questions and you'd kind of go through it, and that taught you how to critical think. Those were really good, the scenarios. And the labs were good too*" (Darcy). Jamie valued the use of scenarios and admired the teacher who would *"make us rationalize our decisions, and that really stuck with me, and I would try to rationalize things through [in practice]...It gets people thinking"*. Kara identified the critical thinking as an outcome of her educational program but also acknowledged the difficulties in teaching critical thinking;

> ...you're expected to be inquiring, to build your own level of knowledge, to be self-directed, to look at literature, and become involved, and become a leader, and stand up for your patient's rights, and those things. They can help [you] develop a philosophy for that. I don't think they can say these are the 10 steps you take...that's impossible to do (Kara).

Most students did not indicate their dislike of lectures or more traditional approaches to teaching, but did indicate a preference for those methodologies that involved them actively as learners. Elizabeth favoured those methodologies focused on learning questioning skills, particularly for clinical practice. Rose commented on the research course as a means of better understanding evidence for practice, and indicated that she developed a belief and commitment to research use in practice; "*research is done for a reason and we know that and we like it*" (Rose). Rose also appreciated a learning environment in which "*we were treated like we were professionals, and that we would be professionals and this is how you should carry yourself.*" New nurses who had been students in a PBL curriculum identified additional benefits of the approach, including learning group process and provision of feedback, a strong focus on decision making, problem solving, and the thinking skills of the practicing nurse, effective teaching skills, and self-direction.

Clinical Experiences

All new nurses described their clinical experiences in their nursing programs as *the* essential element of their preparation for nursing; "*definitely clinical experience was* *the best*" (Pat). Most new nurses admitted a focus on learning procedural skills throughout their programs, and a reluctance to accept the "other" skills as being more important, as their faculty had tried to reiterate;

> *And now that I look back on my undergrad program, I can see what they were saying at the time but it was frustrating because you just wanted to get your skills and look like you knew what you were doing. But I've come to the realization as I go on in my career that you can teach anybody a skill and a procedure and it doesn't take very long and then once they've done it a couple of times, you don't really have to teach them again. As opposed to theory, professionalism, conduct, that kind of thing is a lot harder to pass to somebody. They were trying to develop nurses that could think for themselves, were confident in what they were doing, were professionals, weren't afraid to ask questions of themselves or others…[had] research skills (Lucy).*

Most new nurses indicated that their clinical faculty had focused on skills of critical thinking, decision making, evidence-based practice, and holistic care, and that in fact, this focus in clinical prepared them effectively for entrance to nursing practice. Most new nurses acknowledged the relationship between theory and practice and as discussed previously, recognized that knowledge as foundational to their clinical practice. Although new nurses valued their clinical experience as students and believed that the student experience did add to their experiential knowledge, they also stated that the knowledge gained from that practice was limited in part because of their short times on the individual nursing units and their limited scope of practice as nursing students. As Pat indicated, "*I will relate to experiences I had as a student, you know, but I don't have a lot of experience.*"

Several new nurses made suggestions concerning their clinical experiences as nursing students. Kim indicated that frequent moves to new clinical areas reduced student abilities to learn in practice; "*every time we'd just get the hang of it [on a* *particular nursing unit], they'd tear you out and throw you into something new.*" Others indicated that they didn't feel like 'real nurses' while they were student nurses. Several new nurses stated that the clinical experience needs to be more realistic in terms of the workload of practicing nurses. Nicky stated that

> *I sort of learned some of the basics but I didn't learn about lab work and it was such a sheltered experience. We were just there to bathe patients and do this and that, but we really didn't carry through with a few patients and all their stuff for a day. When we were doing clinical, we weren't ever really ever responsible for the patient and I think a lot of stuff went on behind the scenes, like lab work and making decisions for the patient by the RNs that wasn't ever shared with the nursing student (Nicky).*

In particular, Nicky and others indicated that they were not involved in decision making as students and that they needed to work more closely with practicing RNs before their senior experiences. Jamie and Monica advocated for more realistic patient assignments during their earlier clinical experiences, negatively commenting on their experiences of caring for one patient in first year, two patients in second year, and three in third year. Jamie had asked for four or five patients in her third year (which was refused) and felt over-protected as a student. Jamie and others thought the leap to eight to ten patients in professional practice was a very difficult transition for a new nurse.

Kim and Lynne indicated that in their experiences, new nurses sought employment on those clinical areas on which they had had clinical experiences. Nicky concurred, indicating that the lack of rural experience as students left new nurses unprepared for rural practice settings, and suggested that all student nurses should have experience in the rural setting. In Dale's program, nursing students had clinical experiences in community settings in their last year. Dale's recommendation was for more acute care experiences for those student nurses who intended to practice in acute care settings as new nurses. Monica, Elizabeth, Lynne, and Ellen valued the feedback they received from their clinical teachers, particularly in terms of the higher level skills of prioritizing, reflection and critical thinking, and evidence-based practice. In commenting on the value of feedback from clinical teachers, Ellen indicated that

> *…really telling you when you did it right because that's what you'll remember and you'll do it again and again until it becomes second nature…The negative feedback is definitely good, I mean useful, but not so much of it. It has to come across the right way, because you can shatter the student's confidence if it comes across wrong. …the negative criticisms were said in a very gentle manner (Ellen).*

All new nurses indicated that they valued the precepted fourth year practica highly in terms of preparing them to enter nursing practice and several suggested that precepted experiences start earlier in the nursing program.

Whether new nurses had recommendations concerning their clinical experiences or not, all were strongly supportive of the value of those clinical experiences and recommended increasing the amount of clinical experience and starting them earlier in the program. Many new nurses seemed to yearn for incrementally more responsibility in the nursing program; "*progression of responsibility and accountability that they, meaning the instructors and facilitators, put on you from year one to four. You know, it was like little helpings over and over and over until you finally had a big serving*" (Ellen). Those who had worked as third year student assistants or employed nursing students between their third and fourth years found the experience extremely beneficial and a few suggested that it should be a required part of the nursing program. Others suggested nursing internships as a means of facilitating the transition to practice.

Most new nurses did not feel prepared to enter practice. In particular, they did not feel prepared for intensive care units, and conversely, if they had had a precepted experience in a intensive care unit, they did not feel prepared for nursing on a general unit. Many new nurses indicated that their choice for an employment setting was strongly influenced by their own clinical experiences. Many students indicated a lack of interprofessional opportunities in their clinical experiences, and in particular, identified physicians as those health care professionals with whom they had not learned to work as part of a team.

> *As a student, I often felt like I was underfoot and that I wasn't part of the team at all. So I try to make the effort much more when we have students on the floor or if I'm preceptoring someone, that I introduce them to the physicians. Or I'll get them to call [the physicians] because I think that fear and anxiety of not doing something…it will always be there until you do something, and then you just get more comfortable doing it (Elizabeth).*

Jamie suggested a pre-professional year as a means of "*growing up*" before coming into the nursing program, and completing some of the Arts courses before starting the actual nursing content. As an older student, Jamie observed students coming into nursing directly from high school, which Jamie thought contributed to a curricular approach of being "*babied and coddled in first year, and we could only handle one patient for one morning a week*" (Jamie).

Many new nurses felt that as graduates, they lacked confidence in their nursing knowledge, generally attributable to not knowing what to do in their practices as new nurses. Several new nurses attributed their lack of confidence to a lack of knowledge in the areas of patho-physiology and pharmacology, specifically due to lack of preparation in the educational program. Others indicated that they lacked confidence in their knowledge even though they felt adequately prepared to enter nursing practice. They all nonetheless felt that the educational program had adequately prepared them for their roles as Registered Nurses and that they did have the requisite skills and knowledge for practice. As Lori stated in summary;

> *They'd always say that to us, the instructors. Well, you know what, you guys are really prepared when you leave here. You've just got to put it all together. I was like…oh yeah, this is…never going to work. But you seriously are….you're really a prepared student at the end of it. It's just a matter of getting it all organized.*

Summary

These findings are quite consistent across the 25 participants, and for the two new nurses whose experiences did not follow the norm, the two negative case participants, their experiences confirmed the necessity for the various conditions that others identified as supportive in developing clinical judgement in nursing practice. From the reflections of these 25 nurses, including the negative case participants, I have constructed a theory related to clinical judgement development in nursing practice, and with the theory, a process through which all participants have journeyed, albeit at different rates of progress.

CHAPTER 5

THE PROCESS OF DEVELOPING CLINICAL JUDGEMENT: THEORY AND STAGES

A Theory of Developing Clinical Judgement in Practice: Learning to be a Competent Nurse

Themes

Analysis of data revealed several general themes, the most important one relating to new nurses' need to learn in nursing practice. The second theme related to the importance of the social network for learning in nursing practice, especially in the first year of practice but not limited to that year. The last important theme related to new nurses' need to be employed in learning organizations that invested in human and social capital in order to most effectively develop their practice. I elaborate on these themes through the discussion of the theory of developing clinical judgement in practice.

The Theory

The first research question addressed the issue of how new nurses develop their clinical judgement in practice. Constant comparative analysis of the data revealed consistencies in the experiences of the study participants, and their reflections on these experiences, that have guided the conceptualization of the process of developing one's clinical judgement in nursing practice. I have conceptualized this process as a continuing and cycling one that leads to competence in nursing practice and with continuing learning, could culminate in expert nursing practice. As many participants indicated, the process of developing clinical judgement and expertise in practice is a lifelong commitment in which the nurse must engage, since nursing knowledge is constantly evolving. Failing to learn in practice could result in loss of previously attained competence in practice and would restrict the ability of the practicing nurse to achieve higher levels of expertise. The need for new nurses to learn is readily apparent but the perception of these participants was that expert nurses too must continue to learn to maintain their competence as well as expertise in practice.

Integrating Core Variable

Seeking learning is pervasive throughout the data and is the integrating variable in the process of developing competence in clinical judgement in nursing practice. Six distinct but inter-connected categories in the data articulate with each other through the integrating core variable *seeking learning*. These categories, *learning to make decisions, learning formal knowledge, learning from experience, developing professional relationships, experiencing challenge, and becoming confident* are all connected by the integrating variable and represent different aspects of the process. All categories are evident in all stages of the process but specific categories are more predominant in some stages. All categories represent aspects of learning that are essential to the process of developing clinical judgement.

The integrating core variable *seeking learning* permeates the data and is evident in all phases of the process and in all categories. This category refers to the behaviours of new nurses that were directed toward seeking experiences and opportunities to gain the knowledge needed for effective nursing practice. New nurses entered practice with the expectation of learning and verbally expressed commitment to the concept of lifelong learning. It also includes new nurses' experiences in which they were challenged to learn, sought out learning opportunities, found learning resources, actively engaged in learning, experienced learning, recognized changes in their professional selves as learning outcomes, and learned to make decisions, interact professionally and be confident in their abilities to nurse. Through learning, these participants enhanced their formal knowledge from their educational programs by constructing their practice knowledge on that foundation. Many made reference to "steep learning curves" as they entered practice, indicating an appreciation of both the complexity of nursing practice in specific nursing units and of their own preparation as generalists rather than the specialists they needed to be for their clients. Learning constitutes a central theme in the experience of these new nurses and is the central integrating variable in the process.

The purpose of learning in practice is to construct knowledge to be used in that practice, specifically to convert experience in nursing to nursing practice knowledge. Through reflection on specific vivid or memorable events in the nurse's experience, or on the outcomes of the repeated everyday events of nursing practice, nurses construct knowledge for use in practice. The goal of learning in practice relates to learning the "know how" of nursing, to be added to the new nurse's theoretical knowledge, the "know that" of nursing (Johnson & Ratner, 1997). Many new nurses alluded to the power of knowledge in practice; knowledge provided control in their nursing practice by reducing their uncertainty in decision making.

The goal for many of these new nurses was not limited to the construction of practice knowledge. For many new nurses, engaging in learning in their nursing practice is a goal in itself. Although the initial six months of practice was stressful and difficult for participants, all referred to the amount of learning during this period as satisfying and fulfilling. They could see their practice gains through learning and valued the process of learning for its own merit. In later practice, when the rate of learning slowed somewhat, many new nurses referred to their boredom or "stagnation in practice" and described their remedial measures such as moving to higher acuity sections of their nursing units or to new practice settings in order to stimulate more learning. Their mentors and role models were often nurses who had breadth and depth of practice knowledge through experience in multiple practice settings, reflection on practice, commitment to continuing learning, and prolonged engagement and experience in the current practice setting. Many new nurses attempted to emulate the knowledge of their role models through continual learning, and thus placed themselves in practice situations where they continued to experience the process of learning.

Several factors in the practice environment supported new nurses in their learning, including supportive colleagues, a learning-focused environment, mentoring nurses who role modeled the "idealized practice of nursing" in a practical sense, an evidence-based practice environment, and a collaborative team of health care professionals. In all instances, these organizational conditions and structures supported learning in the practice environment and such hospitals could be categorized as learning organizations with a culture of learning, which provided for and sustained learning networks for new nurses (Schein, 1992; Senge, 1990; Wenger, 1998). Regardless of the quality of the nursing care or the presence of evidence-based practice, new nurses entered a community of practice (Wenger) and learned the existing standards of practice.

In the first year of practice and during new nursing experiences, learning was accompanied by anxiety, a mild form of which was an effective stimulus for learning. Unfortunately, at times new nurses experienced a level of anxiety that literally reduced their effectiveness in practice and their abilities to think critically about that practice. Because of this anxiety, the acuity level of clients, the level of responsibility new nurses assumed, and their inexperience with the client population, their learning in the practice situation was often haphazard and uncoordinated. This experience often produced situations for new nurses in which their progress resembled a 'Two Step Dance' of learning to practice nursing, with two steps forward and one step backwards in their confidence and perceptions of competence in their own nursing practice.

Employing hospitals acknowledged new nurses' needs to learn and put formal orientation processes into place to facilitate their learning early in practice. At the nursing unit level, both formal and informal processes were initiated to assist new nurses to learn. After the first six months of practice, these processes slowly changed as new nurses became orientated to practice and appeared more organized and no longer were dependent on such supportive learning networks. These employing organizations often failed to understand that these new nurses had continuing learning needs in order to provide effective patient care. These organizations failed to support new nurses' learning of higher level skills such as clinical reasoning, teamwork, collaboration, and leadership. Continuing education opportunities such as conferences and workshops were limited and new nurses were not generally supported in their attendance at these learning sessions. Continuing educational opportunities within the employing agency were also limited to the orientation needs of new nurses and tended to address procedural issues rather than contributing to the practice knowledge and clinical judgement of these nurses.

Seeking learning is evident in all stages of the process of learning clinical judgement. *Seeking learning* takes different forms in each stage, uses different learning strategies, is focused on different knowledge, and results in different outcomes in each stage. It is nonetheless the defining feature of each stage as new nurses attempt to learn the knowledge and skills that constitute the clinical judgement that is necessary for competent practice.

Associated Categories

With *seeking learning* as the integrating variable, six other categories are evident in the data concerning the development of clinical judgement. I explored these categories in terms of their properties and relationships with other categories. No category stands alone; all are connected and influence, and are influenced by, other categories. Exploration of the properties of these categories demonstrated change in the properties as a function of time and illustrated the process involved in developing clinical judgement. The inter-relatedness of the categories also changed with time, with some categories more significant at particular times in the process.

Learning to Make Decisions

Learning to make decisions refers to the cognitive reasoning process that arises from uncertainty in nursing practice and includes identifying a problem, considering alternative forms of action (or inaction) and determining the most appropriate course of actions to enact. *Learning to make decisions* constitutes one of the most significant categories in the process of developing clinical judgement, which is not surprising considering the close relationship between clinical judgement and decision making. In examining the various properties and dimensions of this category, I was able to identify changes within this category that spoke to the process of learning to make decisions. Through analysis of the data, typical patterns of change emerged, including a cyclical progression through accepting direction, thinking linearly, thinking on multiple levels concurrently (multi-tasking), thinking critically, thinking holistically, and thinking collaboratively. Some new nurses separated clinical judgement from decision making, indicating that clinical judgement referred to the knowledge that one has gained through practice and applied to the decision making process to evaluate and select the most appropriate alternative. Because these two processes, making judgements and making decisions, seemed to occur concurrently, most new nurses described both as a single process. Separating them in theory allows for greater examination of the process of developing that clinical judgement.

Thinking in practice is a critical element of the process of applying clinical judgement to make clinical decisions (Benner, 1984; Schön, 1983). New nurses indicated that their thinking processes, although developed in their educational programs, were compromised by the demands of the work environment. These contextual influences changed the manner in which they made decisions, with greater reliance on the direction of more senior nurses or strict adherence to policies and procedures as directives rather than guides for care. Making decisions autonomously in practice evolved slowly as new nurses gained confidence in the practice setting and learned the practice norms of the unit. They relied heavily on the validation of their practice decisions by more senior nurses and other health care workers, particularly physicians. Without that validation, new nurses tended not to stretch their professional decision making skills and remained guided by external rules in their decision making. Without validation, they also appeared reluctant to assume more autonomous practice.

With experience, dialogue, and support, new nurses developed heuristics to address commonly encountered patient care issues, thus reducing the time needed to make certain kinds of common decisions. The development of these heuristics facilitated the decision making process but rendered it to the subconscious level where the assumptions underlying the heuristic and the appropriateness of its use in specific situations were not openly examined. Early in practice, new nurses adopted the heuristics of experienced nurses without fully appreciating their origins and development, thus limiting their use of heuristics appropriately. The assumption of heuristics, and later their own development of heuristics was a necessary step to allow new nurses to deal with the multitude of practice decisions needed in daily practice. Heuristics develop slowly with experience or through discussions and observations of the practice of more experienced nurses. New nurses however need their critical thinking skills and clinical judgement to recognize when the heuristic was inadequate to deal with a client situation, again a learning process for these nurses.

New nurses' thinking stances in making decisions in practice were both context-dependent and a reflection of their past learning. Especially in the first year of practice, new or novel situations in practice prompted new nurses to revert to earlier patterns of decision making, which were rule-driven and based on formal knowledge. Experience in new situations added to new nurses' experiential knowledge that facilitated higher order thinking in later practice. As well, as new nurses learned more about their clients, and gained experience with the client group, they were better able to provide holistic care and apply patient values to the decision making process. Learning to make decisions and the use clinical judgement were not independent functions. New nurses were dependent on their colleagues, both nurses and other health care professionals, to demonstrate and discuss decision making and clinical judgement in practice, to validate their decisions in practice, and to mentor and provide direction as needed. In short, new nurses needed a supportive environment in which to learn the knowledge needed to support their developing decision making and clinical judgment.

Learning Formal Knowledge

This category addressed the scientific, formal, or propositional knowledge that new nurses use in practice. In their opinions, new nurses entered practice with current relevant professional practice knowledge from their educational programs. Most new nurses quickly recognized that their formal knowledge was inadequate to provide nursing care for the specific population of clients on their nursing units but described this knowledge as foundational to their development in practice. They recognized and expressed the need for substantive knowledge in the area of their client population and related nursing care. For new nurses, knowledge was power, particularly in those situations where they lacked power and confidence in their abilities to manage client situations effectively. For some new nurses, formal knowledge was provided to them in their orientation sessions, an initiative for which new nurses were very thankful. With a few exceptions, these new nurses acknowledged however that the amount of formal knowledge provided in the work setting was inadequate and that they received very little formal knowledge through continuing education sessions, in-services, or unit-provided learning resources.

Strategies adopted by most new nurses consisted of reading their own textbooks at home following their assigned shifts, and on some units, journal articles provided by educators, colleagues, or physicians. Having been educated within the concept of evidence-based practice in their educational programs, most new nurses viewed scientific knowledge as essential to their practice. They also acknowledged that in most instances, they were not able to access scientific knowledge in practice and needed to rely on the experiential knowledge of colleagues to address immediate client issues in practice. Nonetheless, formal knowledge was a valued part of, and considered the basis for clinical judgement in decision making. Formal knowledge was actively sought, albeit often after the immediate need for the knowledge for client care had passed. Formal knowledge is a necessary part of the development of clinical judgement that is subsequently used to determine the appropriateness and feasibility of applying new scientific knowledge to specific client situations.

Learning from Experience

The category *learning from experience* relates to the experiential knowledge gained through actual experience and in many instances, repeated similar experiences over time. Through these experiences, new nurses had constructed knowledge of those nursing activities and interventions, outcomes of medical approaches, relationships and interactions, approaches to ethical issues, and ways of being a nurse that have contributed to patient outcomes, both positive and negative, and to new nurses' enactment of the role of the registered nurse. Over time, new nurses had experienced an imperceptible deepening and broadening of their nursing practice knowledge and an increase in skills and abilities to manage a constantly changing and increasing variety of situations in their workplaces. Through experience, new nurses came to knowledge of the client situation with an understanding of antecedents, causes, conditions and contingencies, context, consequences and patient outcomes, and contributing factors in the client situation. With this tacit knowledge, new nurses can act with greater confidence to assess and intervene in a developing situation, with an expectation of specific situational or client outcomes. They are also able to more effectively incorporate patient values into their clinical decision making. Recognition of the subtleties and complexities of commonly encountered client situations is based on and adds to the tacit knowledge of new nurses.

When new nurses reflected on their current abilities to manage client issues and workplace situations, they were able to recognize general changes in their abilities particularly when they compared their current skills and abilities to what they remembered of their abilities on entry to the work force. The presence of more recent graduates in their workplaces often prompted such reflection. This reflection on changes in their practices vaguely illuminated the experiential knowledge that new nurses had constructed over the first two or so years of practice but its nature remained tacit. This tacit nature of practice knowledge necessitated learning from experience rather than the more easily transmitted scientific, propositional, or formal knowledge. Experiential or tacit knowledge of practice contributes to the art of nursing, that aspect of practice knowledge that contributes to effective care from the client's perspective and to the expertise of nursing that develops through reflective experiential learning.

In this study, learning from experience entailed many different types of learning experiences including actual presence and engagement in client situations, reflective observational presence, engagement with commentary from a more experienced nurse or other health care professional, and discussion of specific client issues with nurses or physicians. New nurses also learned from various vicarious experiences including generalized discussion of other client situations on the nursing unit, team rounds or health team conferences, narratives or stories of experiences of other nurses, and reading about nurses' experiences. Through such learning experiences, new nurses have added to their experiential knowledge and their repertoire of skills to manage client situations. With sufficient experience, new nurses begin to recognize patterns in client situations and to respond with generalized approaches to specific client situations with the ability to discern the necessity for individualization of approaches. Through experience, new nurses developed heuristics to address certain client situations quickly, effectively, and efficiently without having to critically think through each situation. Although experiential knowledge contributed to skill in managing client situations effectively and even expertly, according to the current norms and expectations of nursing practice, it might not provide the impetus for innovation or advancement of nursing practice, as scientific knowledge might. Experience, and the practice knowledge constructed through that experience, contributed however to new nurses' perceptions of control in various client situations.

The context of the experience was a critical factor in determining how effectively new nurses learned from their experience. The supportive learning network that many new nurses reported in their workplaces assisted new nurses to reflect on their experiences and added the practice knowledge of other more experienced nurses to their emerging knowledge. The tacit nature of knowledge shared in practice required that it be shared in the context of practice where its meaning became more apparent to new nurses and could be incorporated with their existing knowledge. The validation of new nurses' decisions by more experienced nurses along with the tips and suggestions more experienced nurses offered new nurses were critical components of effective learning networks for new nurses. In those contexts where the practice environment was overly demanding or experienced nurses were unsupportive, new nurses accrued experiential knowledge more slowly, lacked confidence in their knowledge, and did not benefit from the practice expertise of their more senior colleagues. Without a doubt, experiential learning and experiential knowledge contribute significantly to the development of clinical judgement.

Developing Professional Relationships

Professional relationships refer to all the relationships that new nurses develop with their clients and families, nurse colleagues, other health care professionals, and the employing institution. These professional relationships constitute a portion of the context of nursing practice and form one of the more important features of the work environment. New nurses are socialized into professional practice and professional relationships through their interactions with nurses, nurse managers, clinical nurse educators, and other health care professionals. They learn their roles in relation to needs of clients and their interactions with other health care members of the team, and modify their role enactment based on feedback from these significant people in the work environment. Developing professional relationships, especially those with clients and their families, and with physicians also constitute new nurse learning in practice, and are indicators of developing competence in practice.

New nurses also observe the practice of others, particularly in terms of their relationships within the workplace. Those nurses who have effective relationships with their clients and families, physicians, other nurses on the unit, and other health care professionals are often used as role models. The nature of the relationships that new nurses develop affects both the effectiveness of new nurses' practice and their learning network in the workplace. Due to the nature of learning in a demanding workplace, new nurses are dependent on these relationships to continue their learning in practice. For these new nurses, their nurse colleagues, and to a lesser extent other health care professionals, constitute their community of practice and provide the context within which their learning occurs and is supported.

New nurses have received and used feedback from persons involved in interactions with them to shape their enactment of the registered nurse role, particularly if the person providing feedback is a respected person. New nurses also observe the role enactments of these respected nurses and often attempt to emulate these behaviours in their own professional roles. Feedback from those nurses who entered into informal mentoring relationships with new nurses is highly valued and acted upon, particularly since new nurses select mentors whose nursing practice was similar to their ideals of nursing practice.

Experiencing Challenge

Challenge plays a significant role in the process of developing clinical judgement. This category refers to the perception of new nurses that the current situation was slightly beyond their capabilities such that it served as a prompt or stimulus for learning. Initially the challenge experienced by new nurses was almost overwhelming, due to the level of responsibility new nurses were required to assume but their senior nursing colleagues assisted them by clearly articulating the demands of the situations. Anxiety accompanied challenge but if it was within reasonable levels, new nurses were stimulated to learn and were capable of doing so. If the situation was truly beyond the new nurse's capabilities, the accompanying anxiety levels interfered with thinking, functioning, and learning, and constituted barriers to effective practice and to learning.

Challenge arises from many spheres in professional nursing practice. New nurses were challenged by the organizational demands of the workplace, entering a new workgroup, socialization into the nursing role, establishing professional relationships, and developing practice knowledge with the unit's client population. During the early period of practice, the challenge experienced by new nurses was high. With experience, the source of challenge changed. New nurses needed the responsibility of patient care to experience these challenges; without this responsibility, they were more likely to remain in an observer role or a more dependent "student" role and felt they learned less. Although challenge was associated with anxiety, many new nurses indicated a preference for challenging practice settings, and without that challenge, spoke of stagnation or boredom in the nursing role. Continuing to learn in nursing practice was associated with challenge, and was a professional value that these new nurses espoused. At approximately 18 to 24 months of professional practice, a number of new nurses made changes in their employment settings specifically because of the lack of challenge in their nursing work.

Becoming Confident

Confidence in nursing practice refers to new nurses' beliefs in their abilities to function effectively within the registered nurse role to meet the needs of their clients and their families. This affective component of nursing practice was an individual attribute that arose out of interactions with clients, families, nursing colleagues, and other healthcare professionals. In early practice, *becoming confident* and *experiencing challenge* are opposing forces in new nurses' practice. Both are necessary for professional development. Confidence develops slowly and is easily affected by new or challenging situations that new nurses encountered. Confidence is a component of competence in nursing practice and relates to one's certainty of the appropriateness of a particular action. Confidence is both an outcome *of* learning in nursing practice and a required component *for* learning in nursing practice.

As new nurses gained confidence in their practice skills and abilities, they described a level of comfort in the professional role. Attainment of confidence does not mean that new nurses have completed their learning but rather reflects a belief that when they encounter challenge in nursing practice, they are capable of learning what is needed for practice. Confidence in practice indicates that new nurses are certain of their professional abilities. Confidence often prompts them to accept increasingly challenging opportunities such as moving to higher acuity units such as intensive care units, assumption of leadership roles such as charge nurse, or transfers to new nursing units to encounter new challenges for learning.

A Theory of Developing Clinical Judgement in Nursing Practice

Developing practice knowledge

The process of developing clinical judgement is an experiential learning process within the context of professional practice (See Figure 1). Developing clinical judgement involves developing the knowledge on which judgements of best actions are made. Practice experience is converted to constructed practice knowledge through several mechanisms; reflection, dialogue, and repetition. In early practice, most new nurses reflect on practice following their assigned shifts and develop most of their knowledge in dialogue with more experienced nurses. With experience, they are better able to reflect on client situations and events in practice, and thus tend to use reflection more often. Engaging in similar situations provides opportunities for new nurses to refine their developing practice knowledge, particularly in those situations where they do not have the opportunity for reflection or dialogue. Repeated experiences provide opportunities

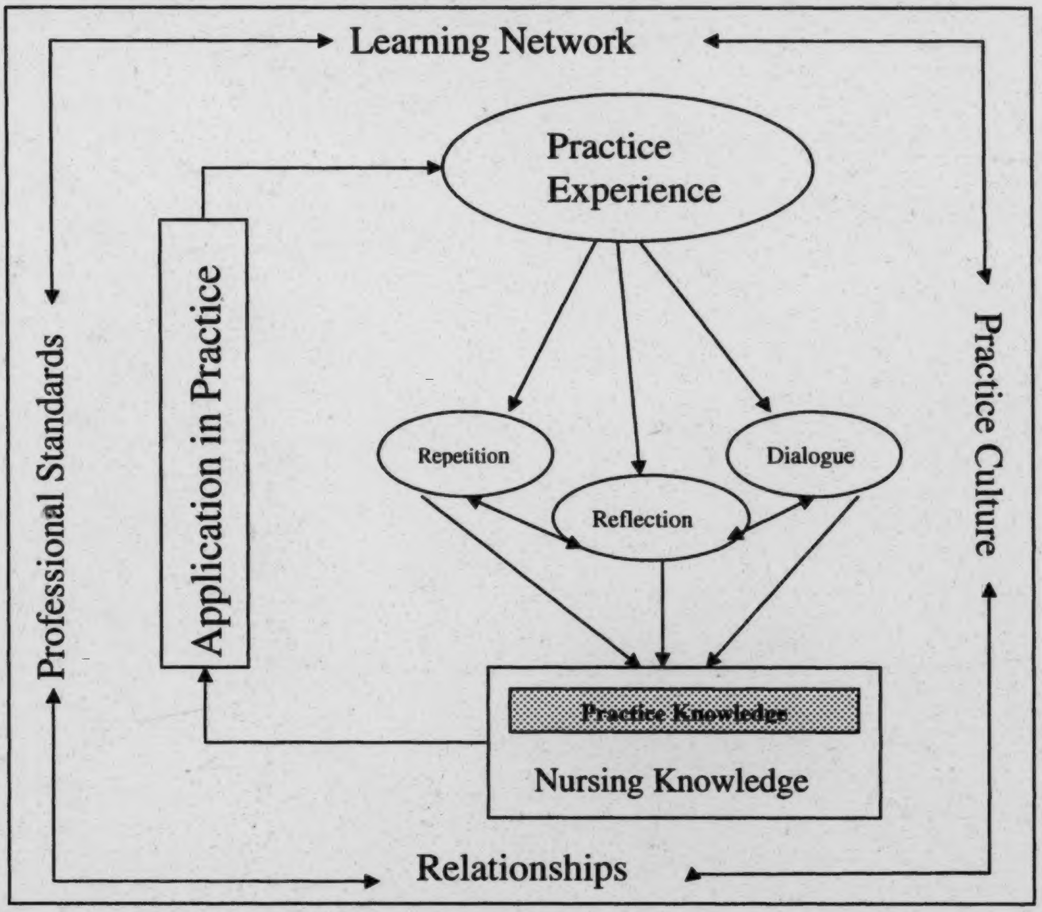
Learning Network
Practice Experience
Professional Standards
Application in Practice
Practice Culture
Repetition
Reflection
Dialogue
Practice Knowledge
Nursing Knowledge
Relationships

Figure 1: Constructing practice knowledge through experiential learning in nursing practice

for improvement of skill and the refinement of knowledge. The knowledge constructed through experience constitutes a portion of the nurse's knowledge for professional nursing practice. With more experience, practice knowledge provides a larger portion of a nurse's knowledge but that knowledge is always based in the professional knowledge of the nurse. This process is cyclical, in which the learner is constantly applying their knowledge in subsequent client situations, thus allowing for trials of their developing knowledge in "real life" to determine its utility and provide the basis for more refinement of knowledge.

In most instances, new nurses develop their practice knowledge in a practice context that provides a learning network of more experienced nurses, a practice culture, and relationships with experienced nurses and other health care professionals. Their knowledge must develop within the professional practice standards of the nursing profession that provide both structure and constraint to the developing knowledge. Clinical judgement is the process of bringing practitioner knowledge, values, and beliefs to bear on the clinical decision making process. Developing clinical judgement is a complex process of learning clinical decision making skills while expanding the practice knowledge that is used to evaluate alternatives and select appropriate actions. The process of developing clinical judgement involves both experiential and formal knowledge, and is an integration of both.

Developing clinical judgement

The process of developing clinical judgement is an iterative and ongoing process achieved through engagement in decision making in client care (See figure 2). Identifiable outcomes of this process include patient outcomes, confidence, and

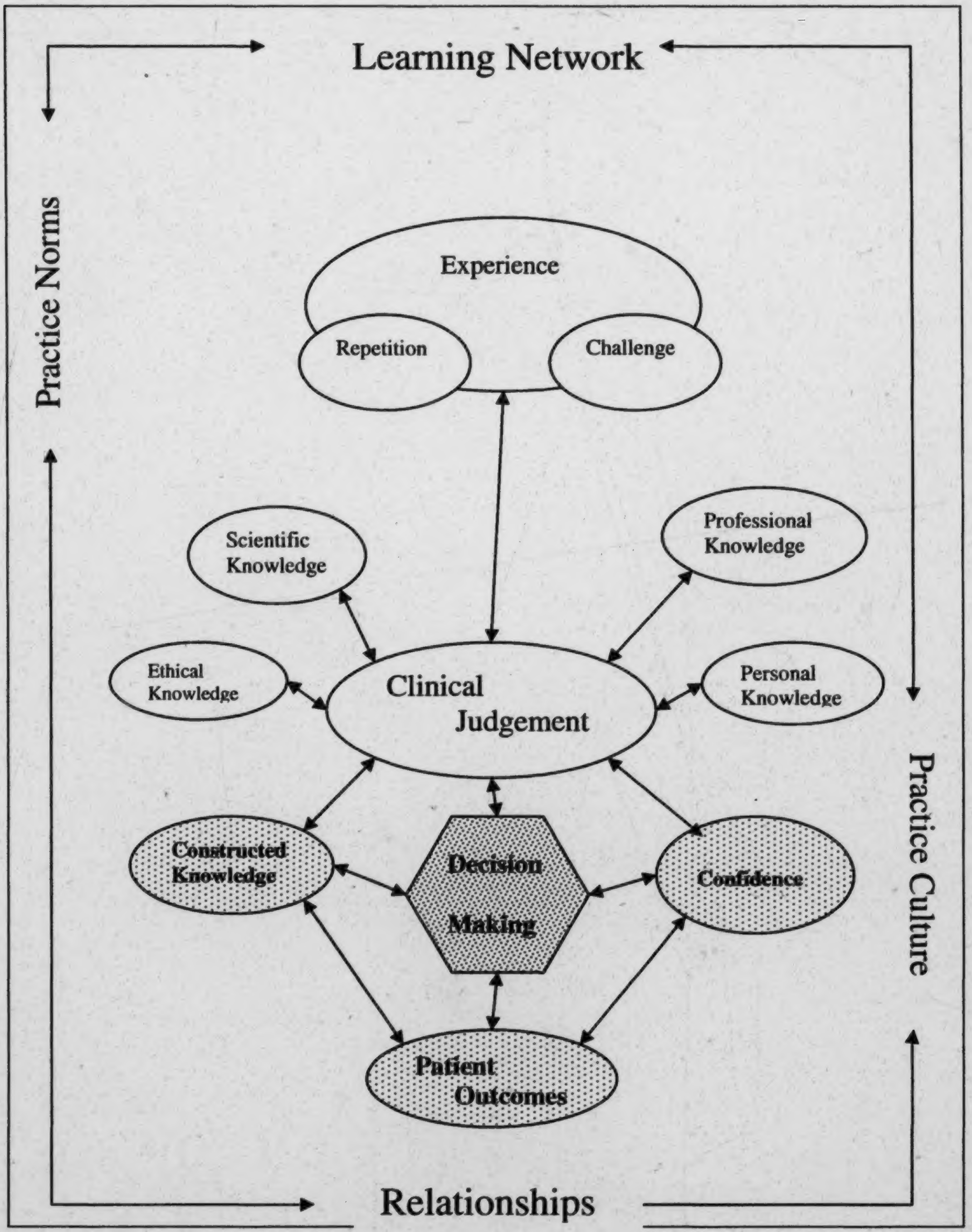
Learning Network
Practice Norms
Practice Culture
Experience
Repetition
Challenge
Scientific Knowledge
Professional Knowledge
Ethical Knowledge
Clinical Judgement
Personal Knowledge
Constructed Knowledge
Decision Making
Confidence
Patient Outcomes
Relationships

Figure 2: Developing clinical judgement within the nursing practice environment.

constructed knowledge (shaded areas in figure 2) that interact and in turn affect subsequent decision making in practice. Experiential knowledge is constructed through reflection on the decisions made and the outcomes of those decisions. Nurses are prompted to reflect on those aspects of client care and decision making that include some aspect of challenge for them. New nurses encounter a great deal of challenge while experienced nurses encounter challenge only in emergent or novel situations in their day-to-day practice. Outcomes of care and decision making also prompt reflection. Positive outcomes of decisions add to experiential knowledge and to the confidence of new nurses that they are capable of making effective decisions. By their nature, negative outcomes prompt even greater reflection on the decision making process and add to knowledge while at times undermining the new nurse's confidence in practice. Reflection on outcomes accounts for the day-to-day learning of more experienced nurses that slowly and iteratively adds to a nurse's practice knowledge and improves clinical judgment in a cumulative but often unperceived fashion.

New nurses' development of clinical judgement and practice knowledge is affected by their experience of, and knowledge of, expected outcomes, client expectations for outcomes, and goals for care. Whether the outcomes are viewed as positive or negative is dependent on the norms of the practice environment, relationships within that practice environment, one's learning network, and the practice culture of the nursing unit. These contextual factors influence the development of clinical judgement and effectiveness of decision making in that particular practice setting. When the contextual factors are positive and supportive, new nurses approach their decision making with greater confidence and are often more willing to take measured risks in those decisions.

When the contextual factors arise from negative and non-supportive environments, new nurses tend to be hesitant and more reliant on the established practices of the nursing unit and the advice of more experienced nurses. New nurses develop their practice knowledge and clinical judgement with due consideration of the environmental and contextual factors within which they practice.

The resulting practice knowledge that is used to judge alternatives in subsequent decision making processes is an accumulation of formal knowledge, experiential knowledge, personal knowledge, and the new nurse's ideal of nursing, including ethical knowledge. This increasing breadth and depth of practice knowledge constructed through experience contributes to more effective decision making and care of the client population, and accounts for increasing expertise in practice.

The practice environment as the context of practice is an important consideration in the development of clinical judgement. New nurses are incorporated into nursing units through a learning process in which the practices, norms, values, and beliefs about nursing practice are communicated to new nurses, both directly and indirectly, and are incorporated into new nurses' practice. As new nurses are socialized into the practices of the nursing unit, and because clinical judgement arises from experiential knowledge, the clinical judgement of new nurses is a reflection of the practices and culture of that nursing unit and how new nurses interpret and incorporate them. The relationships that new nurses develop with nurses, clients, families, physicians and other health care workers, also referred to as the social network of the practice environment, are the context for new nurses' development and constitute new nurses' learning networks in practice. The practice environment is *the* source of the experience that is so critically important to the development of clinical judgement.

The practice setting is crucial to the development of clinical judgement. This environment is affected by a multiple of factors including the leadership of the nursing unit manager, the nursing unit culture, the client population, the available resources, and the philosophy of the hospital or regional health authority. Organizations could invest in the development of their new nurses through the provision of orientation programs, continuing education experiences, learning resources, supportive learning networks, mentors, incremental increases in responsibility, and constructive supportive feedback. Within this context, new nurses also invested in their own development through personal commitments to ask questions, seek evidence for practice, try to 'fit in,' provide safe care, seek diverse experiences, address the nursing unit goals (as communicated by the nursing staff) and accept additional responsibility over time. The process of developing clinical judgement is a reciprocal process that necessitates engagement of new nurses and the hospital or region in which they are employed.

Decision making in nursing practice is a constant part of daily practice for all nurses, and that decision making both contributes to the development of practice knowledge that underpins clinical judgement and is affected by that practice knowledge. The role of experience is critical to this process. New nurses reflect on their experiences, make decisions, receive feedback through the outcomes of their decisions, and add to their practice knowledge and confidence through feedback and reflection. That constructed practice knowledge is used to judge alternatives and is combined with the knowledge of the discipline, scientific knowledge, ethical knowledge, and personal knowledge in the decision making process.

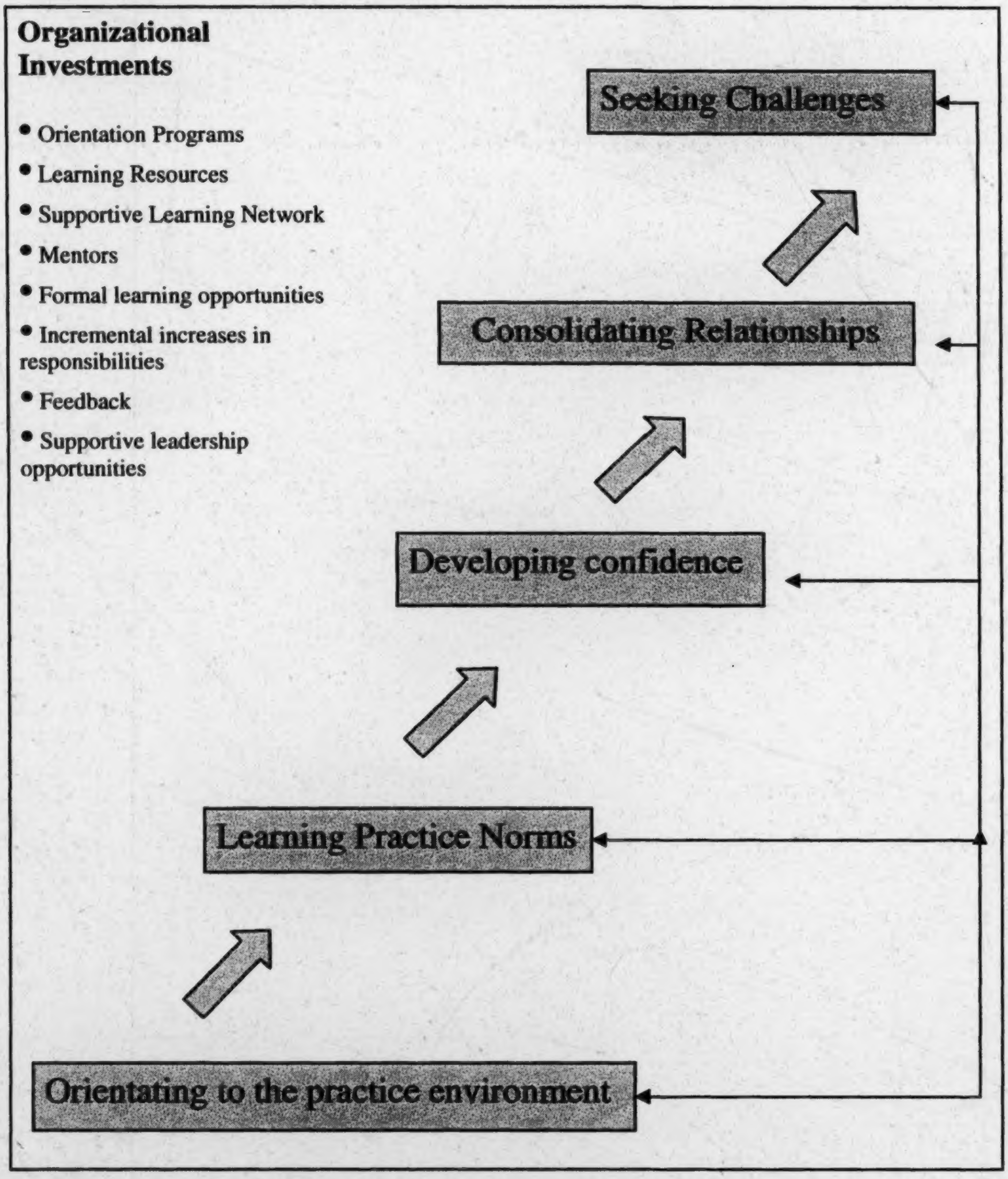
Organizational Investments
• Orientation Programs
• Learning Resources
• Supportive Learning Network
• Mentors
• Formal learning opportunities
• Incremental increases in responsibilities
• Feedback
• Supportive leadership opportunities
Seeking Challenges
Consolidating Relationships
Developing confidence
Learning Practice Norms
Orientating to the practice environment

Figure 3: Stages in the process of developing competence in clinical judgement

Stages in the Process of Developing Clinical Judgement

New nurses go through predictable cyclical stages in the process in developing clinical judgment (See Figure 3). This process is a reflection of their developing decision making skills and their expanding practice knowledge and is dependent on the context of their nursing practice. New nurses focus on different learning tasks at each stage, reflecting their needs to learn different types of knowledge as an indicator of their developing clinical judgement. Time frames vary, based on the complexity and variety of client situations and the supports in the practice situation. The process, although depicted in a linear fashion in Figure 3, is cyclical with novel, emergent, or challenging situations prompting return to earlier stages of the process. Once nurses have attained competence and expertise, they transfer their experiential learning to new situations and their subsequent progress through the stages of developing clinical judgment in practice is facilitated.

Orientating to the Practice Environment (0-20 days)

This period of time is relatively short and reflects the formal orientation that is planned and implemented by the agency. *Seeking learning* in this phase is focused on learning the practice norms, policies, procedures, and people within the practice setting. During this period, they are usually preceptored and have another nurse who is designated to provide them with orientation. For these 25 nurses, the formal orientation program varied from 0 to 20 days and included both classes and preceptored shifts. A few new nurses who had been preceptored as students on the same nursing unit were expected to take up full patient loads on the first day of employment. Others had a short period of precepted or ‘buddy’ shifts before being assigned a regular workload. Overall, most had a brief period of agency-wide orientation followed by four to six preceptored shifts, and offers of additional preceptored shifts as needed.

This period is characterized by intense learning of routines, policies, and procedures specific to the client population served by the nursing unit. New nurses entered practice as skilled learners but not skilled nurses and were generalists in their preparation. Most initially felt that their knowledge preparation for practice was adequate but very quickly realized how much they did not yet know. They were dependent on the precepting (buddy) nurse for information about the Graduate Nurse or Registered Nurse (RN) role that they were assuming and "how things are done" on that nursing unit. In most cases they found that the staff nurses were encouraging and supportive. The amount of responsibility that these nurses would be assuming became apparent to them but they were also protected from that level of responsibility while they were preceptored. For many, their stress symptoms were relatively mild during this period. Learning was facilitated by having the preceptor or 'buddy' nurse working directly alongside, providing direction and feedback, and being immediately available for questions. New nurses learned a great deal through instruction, demonstration, observation, and questioning, and in a few situations, assuming the client load with the precepting nurse as advisor. This period ended when the new nurse was assigned a patient load without the benefit of a precepting nurse.

Learning Practice Norms (0-6 months)

Once the new nurse was carrying a patient load independently, the learning curve was very steep. *Seeking learning* in this phase is focused on learning to provide nursing care according to the accepted norms of practice, and because of new nurses' lack of knowledge, was a time of turmoil and a great deal of learning. Initially, the biggest challenge related to learning organizational skills and literally getting the work done in the allotted time. Procedural skills were difficult initially but most new nurses quickly learned those skills and could carry out the required procedures skillfully (from their own perspective), assisted in part by formal orientation programs or preceptor assistance with those tasks. All new nurses thought that they were caring for full loads of clients immediately after their orientation periods. Organizational skills were more difficult to learn, complicated by the need to learn new policies and procedures, emulate 'usual' nursing practices on the unit, and develop new relationships with physicians and other significant people in the practice environment. New nurses felt they were judged by their organizational abilities rather than evidence-based knowledge of client care, holistic care, or critical thinking abilities, and thus of necessity, focused on developing their organizational skills.

New nurses spent a great deal of time reviewing their textbooks and in some cases journal articles at home after their shifts. All new nurses commented that there was very little time to look information up in textbooks in the practice setting, complicated by the lack of learning resources or Internet connections in most settings. The exception to this statement was the time new nurses took to look up patient medications prior to administration, a big challenge for them in early practice. A key learning strategy in this period was questioning of senior nurses, which was a necessity when resources or time for decision making were limited. After the initial orientation period, new nurses had to seek out another nurse to answer questions, and although most senior nurses were very willing and supportive, they too were also caring for a full client load and had limited time. All new nurses were appreciative of the willingness of more senior nurses to assist them, but recognized the limitations on that assistance. Several new nurses reported to charge nurses and thus, had an experienced nurse more readily and formally available to them.

Stress levels increased markedly during this period, with many participants commenting on feeling overwhelmed, crying, not sleeping well, suffering from gastrointestinal symptoms, and being ambivalent about going to work. Stress was precipitated by the amount of responsibility new nurses had to assume, and was punctuated by a fear of making mistakes or missing something that would negatively affect the client. These symptoms were most intense in the initial period of time, and slowly eased as the new nurse became more familiar with the work expectations. Most new nurses indicated that symptoms lasted from one to four months and were worse in situations with new client conditions, off-service clients, or emergent or deteriorating client situations. All new nurses commented on a sense of feeling overwhelmed.

Strategies that were most useful to new nurses included having a mentor in the practice setting who assisted them as necessary and was readily available for questions, studying textbook knowledge at home, having formal learning sessions or courses, going through client assessments at the bedside and planning care with experienced nurses, discussing client care problems with experienced nurses, and observing expert nurses in practice. Delegation of care to other nurses and LPNs, and interactions with physicians remained challenging throughout this period. As well, many new nurses had to adjust their own ideas of how nursing care should be provided and most acknowledged that they were not providing the quality of care that they idealized in their nursing programs.

Feedback was a very important factor in the development of new nurses' clinical judgement. Initially new nurses received feedback informally from their preceptoring nurses. In most cases, this feedback was constructive, focused on specific learnable behaviours, and given in a timely and supportive manner, often with suggestions for improvement. After the precepted ('buddy') period, new nurses had to seek out feedback on their nursing care and frequently did so. However, this 'consultation' with other nurses was time consuming and was often accomplished at breaks or on night shifts when they perceived there were fewer demands from other health professionals or families. Very few of the participants were provided with formal performance appraisals during this initial six month period, although several had asked their managers about them. The most frequent comment was that "I must be doing OK because no one has told me otherwise." Those who did receive feedback from mentors or more experienced nurses commented on how useful that information was in developing their practice. New nurses frequently sought feedback on their care and decision making by asking more senior nurses, "This is what I am thinking of doing….what do you think?" For the most part, experienced nurses offered unsolicited feedback informally and usually supportively. Occasionally, experienced nurses gave non-verbal feedback that alerted the new nurse to a 'bad' decision or an omission in care. More often, experienced nurses made suggestions for care rather than judgemental statements about deficient or inadequate care.

New nurses constructed tacit knowledge of nursing practice slowly and incrementally. Because initially their focus was on learning organizational skills, new nurses tend to be focused on technical skills, tasks, and 'getting things done'. They often described their own thinking as linear when compared to their experienced colleagues whom they described as being able to multi-task and keep many things in mind at the same time. Experienced nurses provided tips and suggestions that were very useful in helping new nurses learn organizational and procedural skills more quickly. Informal discussions or consultations with experienced nurses were instrumental in helping new nurses recognize important aspects of client conditions and care that were not in textbooks. Senior nurses who modeled particular behaviours such as holistic care, positive interactions with physicians, evidence-based practice, and innovative practice approaches were useful to new nurses in expanding their approaches to care. New nurses described modeling their decision making and care on nurses they respected in the practice setting. These nurses were also the ones that they tried to approach with their questions about care and several new nurses developed mentorship relationships with these senior nurses. New nurses expanded their own experiential knowledge through reflection on the outcomes of their care, especially in terms of negative situations or mistakes. They also gained vicarious experience through the stories and discussions of past client situations with experienced nurses especially on breaks and night shifts.

Toward the end to the six month period, many new nurses indicated that they slowly realized that they could 'do the job'. This realization was accompanied by a sense of confidence that they could meet the expectations of the nursing staff on their units, were interacting with physicians and other health care professionals adequately, had developed good relationships with their clients and in some cases their families, and were less focused on the tasks and organizational demands of the role. Their care was safe. Initially, new nurses feared interactions with physicians, in part due to a fear of negative repercussions of perceived ‘unwarranted’ requests or phone calls to physicians. Most of new nurses’ interactions focused on describing client situations, requesting necessary orders, and basically avoiding extended interactions. Any questions concerning client progress or treatments were asked tentatively and physicians’ responses were accepted without challenge.

By the end of six months, stress symptoms had disappeared except in new situations, in interactions with physicians, or in any disagreement with nurses or other health care professionals. They enjoyed what they were doing. At about this point, they tried to focus on more holistic client care and critical thinking about client care at this point, although these aspects of nursing care had never been completely absent from their nursing care. They achieved this level at different points depending on the homogeneity of the client group and the similarity of client conditions.

Clinical judgement, the evaluative aspect of decision making, was seen as slowly developing. Most new nurses defined clinical judgement as the practice knowledge that aids in decision making and has developed through experience and thoughtful reflection. From their clinical experiences in their nursing programs, their clinical judgement was beginning but these nurses did not have any confidence in it. They were more attuned to the clinical judgement of more experienced nurses and were willing to trust received knowledge from others over their own constructed knowledge through practice. With experience, especially repeated experiences, they were more able to take advice from other more experienced nurses and combine it with their own knowledge to determine a course of action. Developing confidence in their practices was a necessary component for this process to proceed.

In most instances, they combined senior nurses' advice that was congruent with their plans of actions with their own developing practice knowledge. The fact that the information or direction from more senior nurses was similar to or the same as they were planning was a validation of their own clinical judgement and enhanced their confidence to make similar decisions on their own in future. As one nurse stated, "I was relying more and more on my own head." In most instances, the new nurse's plan of action was not wrong but was not acted upon quickly enough, likely out of a lack of confidence. If the plan of action involved contacting physicians, new nurses tended to delay, whereas senior nurses encouraged more timely responses.

In those circumstances where the advice of more senior nurses conflicted with their plans of action, new nurses quickly adopted the plan suggested by others. However, this 'near miss,' 'mistake,' or potential error in judgement was an impetus for greater reflection on decision making and often prompted the new nurse to seek more information from formal sources of knowledge such as their textbooks and journal articles, or acknowledged expert sources such as charge nurses, mentors, or physicians. Because most of this feedback was offered as suggestions or tips, the discrepancy was not seen as a criticism of the new nurse and thus, was most often received positively. Suggestions for care that were in direct opposition to new nurses' actions (or inaction) were most often provided in a supportive manner that encouraged the new nurse to proceed with their developing confidence intact. By the end of the six month period, new nurses were confident that their care was safe but also recognized significant differences between the care that they provided and that provided by senior nurses. Experience in the practice setting was described as the only means of addressing this difference.

Developing Confidence (6-14 months)

Having gained a self-perception of qualified competence in their jobs, new nurses slowly practiced with more confidence in their decision making and nursing care. *Seeking learning* in this phase is focused on learning how to provide nursing care more dexterously and to refine their practice to standards of practice that they admired in other nurses. They had greater reliance on the knowledge in their heads and less on textbook sources. Their confidence was enhanced by repeated experiences with clients and positive outcomes that new nurses recognized as having been effected by their nursing care. This confidence was also fragile, and could easily be challenged by new client situations, 'bad' days, untoward client outcomes, and negative interactions with other nurses or health care professionals. Acquiring more experience, especially associated with higher levels of responsibility such as working in observational units, was a 'definite confidence booster'. Gaining confidence in practice was an explicit focus of new nurses during this period.

New nurses found that their interactions with clients were more satisfying and focused on individualizing care and acknowledging family and community connections. Many had indicated that in the first six months, they had not been able to provide care in an individualized manner as they wished they could. During this period, they were more focused on engaging families in care and ceased to fear the questions that families might ask. They had a greater focus on educating clients and their families and more knowledge of community resources and services. Their confidence to 'make a difference' was much higher.

They still needed feedback from their colleagues but relied more on their own perceptions of the effectiveness of their care. Their questions of colleagues were less frequent and related to professional discussions of best approaches to care. ‘How to’ questions emerged infrequently, usually in unusual or novel situations. Several mentioned that they had become more aware of the nature of the question that they were asking, and acknowledged that they didn’t want to ask ‘stupid’ questions. In some cases, experienced nurses began to indicate some frustration with questions that they thought the new nurse should know ‘by now’. Although new nurses sought out their colleagues’ feedback less frequently, they were still attuned to the opinions of more senior nurses. Positive comments contributed to their developing confidence while negative comments, although of concern, were less likely to distress the new nurse. Differences of opinion concerning client care were less likely to result in the new nurse complying with the opinion of the more experienced nurse. Because new nurses were now more aware of practice differences among the nursing staff, they were more selective of the experienced nurse that they questioned and considered the information provided in light of the source.

Most new nurses described themselves as being more attentive to details of client care, aspects of care that they described as ‘not being in the book’. In all instances, they attributed this practice knowledge to experience and understanding the importance of small aspects of client care. Outcomes of care were becoming indicators or benchmarks for these new nurses and they started to see that they could affect outcomes by this attention to detail.

Clinical judgement, which new nurses described as coming from their experience, knowledge from others, formal learning sessions like in-services and conferences, their basic nursing education, and understanding the usual course of events for the client group, developed significantly during this six to eight month period. Noticeable increases in confidence in the professional role accompanied more experiential knowledge. By the end of this stage, new nurses felt more confident and competent, a transition that many of their more senior colleagues acknowledged informally. An external indicator of this developing competence and confidence was a change in the role of these new nurses in their work groups; they started to become resources in practice for other new graduate nurses coming into the practice setting. Auxiliary workers started seeking their professional advice and discussing practice issues with them. Other registered nurses changed their relationship focus from one of supporter and teacher to that of colleague and peer, often including them in discussions of practice issues and challenges in patient care. With increasing dexterity and organizational skill, these new nurses were no longer bound to the procedural tasks and organizational crises. They changed their focus to what several participants described as higher level nursing skills, including teaching, managing and coordinating care, and interacting with other health care professionals, especially physicians, to provide quality health care. They were unable to state the ways in which their clinical judgement had changed but delineated how their nursing care improved due to better knowledge and decision making abilities, which they all attributed to their experience.

Retrospectively, most new nurses indicated that they felt competent in practice by approximately 12 to 14 months. Many stated that they felt that their care of clients was comparable to other nurses on the nursing unit although more experienced nurses may have perceived new nurses' competence in a different manner. This level of competence was described as being more complete and holistic as compared to their statements of competence in practice in terms of safety, procedural and organizational skill at six months. There was no clear defining moment at which they knew that they were competent. They had a slow realization that they could handle the day-to-day requirements of the role and that they derived satisfaction from the quality of care that they could provide their clients (although circumstances could prevent them from doing so). At six months, they were able to complete care in a safe manner but they often aspired to higher levels of practice, much as they idealized in their nursing programs. They described the period of 6 to 12 months as one of gaining experience and confidence in practice, an attribute they lacked at six months, and being able to provide care more to their own standards of care.

Consolidating Professional Relationships (12-18 months)

At 12 to 14 months of practice, most nurses indicated satisfaction with their level of practice and their roles within their own work groups. *Seeking learning* in this phase is focused on developing collaborative professional relationships with other nurses on the unit and with other health care professionals such as physicians since they now acknowledged that they contributed effectively to effective client care. They perceived that they generally had earned the respect of their nursing colleagues and functioned comfortably within the nursing work group. They had developed positive professional relationships with other nurses as well as with other health care professionals such as pharmacists and physical therapists. Many had developed social relationships with other nurses on their nursing unit, often with younger less experienced nurses, and several had strong mentorship relationships with 'expert' nurses in the setting. Many new nurses stated they enjoyed their practice and felt that they were providing good nursing care. Although some stated that the practice environment was very demanding and in itself influenced the quality of care that they could provide, they also expressed confidence that they were able to provide good nursing care and that they contributed to good client outcomes. This period of time involved consolidating knowledge, both formal and experiential, and establishing relationships based on their competence in their roles.

They engaged in more discussions with other health care professionals and were concerned with gaining the respect of physicians with whom they worked. Whereas new nurses had engaged in discussions with physicians only to obtain required medical treatment orders, nurses in this stage sought opportunities to discuss client care with physicians, seek answers to their questions about conditions or treatments, and suggest alternative or improved approaches to care. Indicators that physicians were willing to engage in more in-depth discussions were important to these new nurses. Many new nurses thought that experienced nurses' relationships with physicians distinguished expert nurses from themselves. They noted that physicians 'respected' these nurses, listened to their concerns about client care, and discussed treatment plans with them. Other new nurses also suggested that when they acted more autonomously in nursing practice, they earned the respect of physicians. New nurses aspired to positive relationships with physicians and started to make suggestions, ask questions, and offer opinions about treatment and client progress. Many have found that being able to discuss client issues with physicians was an important indicator of their developing clinical judgement and competence in practice.

Many new nurses indicated that they were able to provide more holistic care and to respond to more subtle aspects of client situations and need for care. This commitment to client care necessitated referrals to other health care professionals. With greater confidence in their own judgment and competence, these new nurses became more insistent on other health care professionals fulfilling their roles in terms of client care. New nurses' roles as advocates for the client slowly emerged during these times as they gained confidence in both their assessment of client needs and their relationships with others. With confidence, many of these nurses viewed their requests for physician assessment or treatment as valid and thus persisted in their requests and insisted on action. Many had gained better knowledge of the client and often indicated to physicians the treatment or assessment that they felt was necessary. They interacted around the needs of the clients.

Their need for learning continued but rather than being knowledge in textbooks, it was now available through experiential learning. They generally felt confident with their knowledge of client conditions but expressed interest in learning that would broaden their understanding of client experiences, such as observing surgery or common diagnostic or treatment procedures. They were also interested in other ways of providing care and expressed interest in formal learning courses, sessions, or programs to increase their level of practice knowledge. In some instances, they sought out research to support practice, but a focus on evidence-based practice was often contrary to usual practice on the nursing unit and was completed in a quiet and non-challenging manner. Several new nurses indicated that they had mentors who were evidence-based practitioners and this mentoring was critical to their focus on research evidence in practice. They indicated that they engaged in more critical thinking about client care and started to take 'risks' in their care planning. These risks included making suggestions about client care, engaging with clients and families more and at a deeper level, deviating thoughtfully from usual practices, and seeking a greater depth of knowledge about particular aspects of client care and the client experience.

During this period, the rate of learning was much slower than the first six months of practice. Although all new nurses spoke of the anxiety associated with the first six months, almost all expressed satisfaction that they had learned so much. The second six months of practice involved a less obvious rate of learning, but all could feel changes in their self-confidence and equated the slower rate of learning with integrating past learning, or 'putting it all together.' From 12 to 14 months, where nurses perceived that they had already achieved a level of competence and self-confidence in practice, they perceived that they weren't learning very much.

Most new nurses had attended only one conference during the previous 18 months of practice, and a significant number had not attended any conferences. Conference attendance on those units was reserved for senior nurses. Those who had attended were very enthusiastic about their learning in these conferences and expressed the need for formal learning sessions to add to their knowledge. Most indicated that other than 'education days' or product demonstration in-services, their opportunities for formal learning were very limited. Their needs for information had surpassed the level of information available in their own textbooks, and several stated they used libraries and journal articles to augment their professional knowledge. When they considered the previous 12 to 14 months, new nurses indicated satisfaction with their professional roles and felt that they were developing well. They had generally achieved a level of professional practice to which they had aspired.

Seeking Challenge in Clinical Practice (18-24 months)

By 18 months into practice, most new nurses felt that they were able to practice nursing on that unit in a competent and professional manner and had become valued members of the unit staff. *Seeking learning* in this phase is focused on becoming resources to others on the nursing unit, demonstrating clinical leadership, and in certain situations, looking beyond the nursing unit for challenge in their practice. Because the rate of learning was slower and few had formal opportunities for learning at conferences or courses, about half of the participants indicated that they knew that they had to make some changes in their employment settings. These changes were planned in spite of the fact that most new nurses were feeling very comfortable in their practice settings and felt that they had redefined their roles to include active strategies to improve client outcomes and to interact with others in positive and satisfying manners. All indicated satisfaction with their progress and could see in their interactions with others that they were perceived as competent practitioners. Most enjoyed their work settings.

A number of participants indicated that they started to experience a sense of restlessness or slight boredom with their jobs, and a feeling that they were no longer learning. The onset of this feeling depended on the complexity of the practice setting, including acuity and diversity of client conditions and the opportunity for higher acuity care in observation units. On units with fairly homogeneous client groups and client conditions such as orthopedics, this sense of restlessness seemed to start earlier. Many new nurses indicated that this vague sense seemed to start in the twelve to fourteen month period but became much more prominent in the eighteen to twenty-four month period.

Of the 25 participants, 19 moved to other practice settings or other employing agencies. Although reasons for moving are not exclusive to a single reason, the primary motivations are clear. One participant left an unsatisfying work environment, while two moved for fulltime employment after their temporary fulltime jobs ended. For seven participants, this move was part of their career planning, which included a period of time on a general medical or surgical unit and then a move to an intensive care nursing unit or another nursing experience that required prior experience and included more challenge. Three made moves to hospitals in other cities for family reasons. Another group of six moved for greater challenge. For 13 participants, these moves provided greater professional challenge and often provided environments in which they continued to learn. Seven have already taken or are enrolled in graduate programs or advanced practice certification and another six indicated their intentions to do so in the near future.

Another group of six participants, those who did not experience the sense of boredom, indicated that with time, they began to see themselves as having a great deal to contribute to clients on the unit. They went through a similar process to the other group of participants but continued to experience learning in their practice, albeit at a slower rate than initially. These individuals perceived that they had gained a level of expertise that they were interested in sharing with others. They began to assume roles of clinical leadership and derived satisfaction from adding these responsibilities to their nursing care roles. Clinical leadership was most evident in their care of clients where they acknowledged their expectations of superior care for their clients. They demonstrated partnerships with physicians and other health care professionals and often enacted the same characteristics that they respected in senior nurses and mentors. They became resources to new nurses on the unit and engaged in mentoring, precepting new nursing staff or students, and providing information and support. They frequently demonstrated support of a learning environment in their workplaces and contributed journal articles and other resources to education boards or binders. Several were responsible for initiating these learning resources for their colleagues on the nursing unit. Even after three to three and a half years in clinical practice, few of these nurses aspired to different nursing roles such as nurse manager or clinical educator although several added additional responsibilities such as committee work or research to their fulltime employment as RNs. The addition of clinical leadership seemed to be a key factor in retaining these nurses in their practice settings.

The process of learning and developing one's clinical judgement does not stop with the end of the first two years of practice but the nature and rate of learning are different. Those who have moved to new practice settings have found a similar but shorter process in learning clinical judgement in their new settings. Clinical judgement remains an elusive concept that underpins practice but is difficult to identify. The role of experience in developing clinical judgment is pivotal but not exclusive of formal learning and evidence-based practice. Many participants have been very purposeful in developing their clinical judgement through studying, usually at home, questioning, referring to research literature, seeking additional learning experiences, responding to nurse feedback and client outcomes, reflection, participating in formal learning opportunities, and selecting employment opportunities to develop their knowledge and judgement. In spite of their commitments to lifelong learning, it would be fair to say that many of these participants' nursing units have not supported them in many of their formal learning strategies.

CHAPTER 6

DISCUSSION

In this research, I addressed the issue of how new nurses develop their clinical judgement in practice during their first two years of practice. Through grounded theory, I explored the beliefs, perceptions, and reflections of 25 nurses with between two and four years of nursing practice. The focus of our discussions related to their development of clinical judgement. In doing so, we also explored the development of their nursing practices overall, in part because of their uncertainty of the definition of clinical judgement and the fact that their clinical judgement developed in context of their nursing practice and could not be separated from it. Participants provided self-reported analyses of their own development, without corroboration from their supervisors or colleagues. In doing so, they identified very subjective accounts of their journeys to their perceived competence in clinical judgement. Their definitions of competence and clinical judgement were very limited and reflected a lack of in-depth analysis, as could be expected of individuals whose goal is to develop competence as opposed to defining it. Their reflections and stories of their journeys did however provide me with an understanding of their development of competence and clinical judgement that were embedded in their nursing practice.

Most new nurses described their own clinical judgement as a multi-facetted phenomenon that included their experiential knowledge of practice in their specific setting, knowledge of the client group, exposure to a multitude of everyday experiences, tacit embedded knowledge, formal knowledge, and relational knowledge. Clinical judgement developed within the context of professional and client relationships, practice culture and norms of the specific nursing unit, and professional nursing standards. Most new nurses identified clinical judgement as that knowledge that improved the quality of the decisions that they made in practice. Confidence in nursing practice evolved from greater competence in practice and contributed to better clinical judgement, which they described as the application of their experiential knowledge to the practice situations for which they were responsible.

The process of developing clinical judgement in nursing practice has emerged from the data contributed by 25 participants in diverse acute care practice settings in Saskatchewan and Alberta. While acknowledging the importance of context when developing a theory grounded in the data, it was also imperative that I position this theory in the extant literature of the field. In the following discussion, I compare the theory of developing competence in clinical judgement to existing theories of experiential learning and development of expertise in nursing practice, particularly in terms of the development of clinical judgement in practice.

Experiential Knowledge

The integrating variable or basic social process of the theory of developing clinical judgement in practice, *seeking learning*, corresponds closely to the experiential learning cycle identified by Kolb (1984), which he based on the work of Dewey, Lewin, and Piaget. Kolb's experiential learning cycle is intended to describe the general phenomenon of constructing knowledge from one's experience through the process of learning. Ideas and thoughts are formed and reformed, and concepts are derived and continuously modified through experience. Kolb identified four modes of experiential learning that reflect four different kinds of learning activities and abilities: concrete experience or actual involvement in experiences; reflective observation, the ability to reflect on and observe experiences from a variety of perspectives; abstract conceptualization, creating concepts that integrate observations into logically sound models or theories; and active experimentation, the ability to use the constructed theories to make decisions and solve problems. The cycle is ongoing, representing the manner in which learners experience their worlds, observe and reflect on it, form concepts to explain the experience in terms of concepts and theories, and test their conceptualizations in the world (Kolb; Dewey, 1933, 1938).

Kolb (1984) described the process of experiential learning as consisting of diametrically opposed adaptive orientations, *comprehension* and *apprehension*, that determine how experience is transformed into knowledge. Comprehension involves grasping or taking hold of an experience reflectively and cognitively through conceptual interpretation and symbolic representation. Apprehension involves learning from experience through reliance on the tangible felt qualities of the immediate experience and as such is not a cognitive reflective process. Both types of *prehension* (Kolb) are involved in constructing experiential knowledge. The cycle represents how conceptualizations are grasped from experience and transformed, and that without that transformation, experience does not become knowledge. This learning process is cyclical and ongoing and reflects the iterative nature of the development and refinement of the knowledge thus constructed. These diametrically-opposed dimensions in the cycle contribute to the development of knowledge that is known conceptually and can be communicated, and knowledge that is tacit, embedded in action, and contributes to the artfulness of the actions but is difficult to communicate. Both types of knowledge are important.

As well, the cyclical process proceeds with varying degrees of conscious awareness of what is occurring in the experience itself. Individuals consciously reflect on those situations that present some degree of challenge or novelty to the usual routines and practices of the individual. Reflection is a critical aspect of developing constructed experiential knowledge, the basis for clinical judgement. In Kolb's theory (1984), he identified an adaptive learning mode in the experiential learning cycle that is focused on observation and reflection. Kolb conceived reflective observation as following concrete experience and being a necessary step to the transformation of experience to knowledge. Reflection as a process converted experience into knowledge through exploration of the meaning of the experience and its conceptualization within the context of existing knowledge. As a profession, nursing has accepted reflection as a critical element in knowledge construction and meaning making in practice (Benner, 1984; Benner, Tanner, & Chesla 1996b; Benner, Hooper-Kyriakidis, & Stannard, 1999; Bevis & Watson, 1989; Brookfield, 1991; MacLeod, 1996; Palmer, Burns, & Bulman, 1994; Schön, 1983; 2001) and purposefully teach reflective strategies in nursing programs. Critical thinking in practice, a basic tenet of nursing education programs, is based on reflection, sometimes termed *critical reflection* or *reflective skepticism* (Brookfield). New nurses are expected to approach their nursing practice with such a reflective attitude but, as many participants indicated, reflection takes time and thus, often occurred at home after the shift ended.

In the theory of developing clinical judgement, reflection on experience was often stimulated by and supported by interactions with more experienced nurses who assisted new nurses to make their own experiences meaningful and add to their experiential knowledge. Although Kolb (1984) seemingly suggested that 'meaning_making' is an individual subjective experience, he did acknowledge that reflection does arise through interactions with other individuals and that "experiences [be] shared and interpreted through dialogue with one another" (p2). For participants in this study, interaction and interpretation are very important aspects of experiential learning in professional practice.

In the experience of most nurses including new nurses, common and everyday practice did not stimulate the same amount of reflection as challenging or novel situations but these experiences were nonetheless accountable for the refinement of experiential knowledge and practices over time. Learning continues to occur in the commonplace, and as Kolb (1984) indicated, this type of experiential knowledge may be apprehended rather than comprehended through an emotional rather than cognitive process. Such was the situation for many new nurses who could identify changes in their practice over time but were not able to discuss their new knowledge as a discrete entity. In many instances, new nurses had developed their practice knowledge by apprehension, through their continuing participation in situations that they no longer found challenging but in which their skill levels were lower than their more experienced colleagues. In this more subtle process, new nurses added to their experiential knowledge through awareness, appreciation, and adjustment (Schön, 1983), thus improving their practice especially in terms of the art of nursing and their clinical judgement. As is typical of practitioners, they could describe what they were capable of doing with their clients but they were usually unable to articulate their new knowledge since it was embedded in their practice.

Kolb (1984) does not theorize on the development of improved skill levels or knowledge through involvement in experience and learning through apprehension, other than to state that it occurs. In this study, participants indicated that they improved their own practice through experience by reflecting on client outcomes, gaining feedback and suggestions from clients, experienced nurses, and other health care professionals, and increasing skill and dexterity through familiarity with client situations and the demands of the work situation. Most new nurses stated that they had improved their practice through reflection but also through repeated opportunities for practice associated with increased confidence levels.

In this study of the development of clinical judgement, experiential learning was occurring within the scope of professional practice, which imposes a higher level of expectation on the learner. Schein (1974) stated that professional knowledge has a threefold division; underlying discipline or basic science knowledge, an application to practice component, and a skills and attitude component that affects the actual performance of services. Although Kolb's theory (1984) addresses issues of learning from experience, it however does not adequately address the process of becoming increasingly proficient in one's practice knowledge, particularly as one becomes accustomed to the practices and thus less reflective. In the theory of developing clinical judgement in practice, new nurses encounter a great deal of challenge in their everyday practices. This level of challenge raised many situations to their consciousness, thus stimulating reflection and conceptualization of practice knowledge to cope effectively with such situations. New nurses are constantly thinking-in-action (Benner, Hooper-Kyriakidis, & Stannard , 1999) or reflecting-in-action (Schön, 1983) and adding to their conceptual knowledge of practice norms, policies, procedures, and professional knowledge. They are also reflecting-on-action at later points after their shifts are completed. Since professional practice is constituted by an overwhelming number of experiences and decisions daily, effective practitioners cannot reflect on every experience of their day.

Experienced individuals develop heuristics to address those more commonplace or previously experienced occurrences. Heuristics, described as cognitive aids and mental maps that assist in decision making (Brannon & Carson, 2003; Dowding & Thompson, 2003; Garb, 1996; Kahneman & Frederick, 2002; Schwarz & Vaughn, 2002), serve as shortcuts in practice to address the common place occurrences within an individual's professional practice. Heuristics increase speed and efficiency of decision making in practice but also remove the event or occurrence from reflective and critical thought, thus possibly leading to systematic individual errors in practice. Kahneman and Frederick stated that heuristics occupy a position between the "automatic parallel operations of perception and the controlled serial operations of reasoning" (p. 50) and provide a basis for "spontaneous, intuitive, effortless, and fast" (p. 49) decision making. Benner et al. (Benner, 1984; Benner, Tanner, & Chesla, 1996b; Benner, Hooper-Kyriakidis, & Stannard, 1999) referred to this type of decision making as non-reflective situational understanding that emerges from practical experience in nursing, a description of the heuristics that expert practitioners tend to use.

New nurses had few heuristics for decision making in practice but as they gained in experiential experience and knowledge, they developed these aids themselves or through dialogue with experienced colleagues. In spite of the use of heuristics, new nurses likely increased the effectiveness of their practice through critical thought and comprehension, and when heuristics were used, through apprehension. Schön (1983) however described the development of "professional artistry," through knowing in action, a dynamic and continuous process of awareness, appreciation, and adjustment to account for increased expertise in day-to-day practice. This process also incorporated a self-monitoring function that also made provision for improvement of professional practice. In the theory of developing clinical judgement, when nursing practice becomes more common place, it is often the outcomes of client care that prompt further reflection, self-monitoring and development of both constructed knowledge and the confidence to use that knowledge. In these instances, repeated experiences added to the development of competence and expertise in practice.

The process of developing clinical judgement in practice corresponds in part with Kolb's experiential learning cycle (1984) but this theory is insufficient to explain the depth and complexity of learning the experiential and formal knowledge needed for professional practice. Along with experiential knowledge, new nurses are required to incorporate several other types of knowledge in their practices, including formal, personal, ethical, and socio-political knowledge, all within the context of the practice environment with its culture and norms. The task of learning to practice nursing effectively is challenging, stimulating, and exhausting, as new nurses indicated. Kolb's cycle of experiential learning inadequately addresses the complexity of learning in the practice setting while practicing, the multiple demands on professional learners, the challenges and dynamics of workgroups, the culture of work organizations, and the external standards governing individual nurse actions in practice.

Level of Expertise in Nursing Practice

In this study, participants discussed their perceptions of their development of clinical judgement in practice, and placed that development within the larger framework of their professional development as registered nurses. The process of developing clinical judgement is the process of constructing experiential knowledge and learning the art of nursing, specifically in terms of making decisions in practice and reducing the uncertainty inherent in client situations. All new nurses indicated that they perceived the substantive knowledge of the discipline as the foundation for the experiential knowledge that they constructed as they practiced. They used formal knowledge in concert with experiential knowledge within the context of professional practice with a specific client population on a particular nursing unit.

New nurses encountered specific stages in their development, as Patricia Benner and her associates demonstrated in Benner's seminal work and subsequent publications related to the stages in the development of expertise in practice (Benner, 1984; Benner, Tanner, & Chesla, 1996b; Benner, Hooper-Kyriakidis, & Stannard, 1999). This study focused on the development of clinical judgement between Benner's (1984) stages of Advanced Beginner and Competent, since she identified the development of clinical judgement as a critical element in the development of nursing expertise. In terms of their clinical judgement, these participants described their competence in practice as consisting of increased understanding of client situations, the ability to anticipate likely courses of events, cognitive as well as emotional responses to unexpected events in the client situation, understanding of the contextual nature of client responses, increased ability to interact with the client and family at a more meaningful level, and a sense of responsibility for client outcomes. They had a better grasp of the client situation and could respond to client needs in a more holistic fashion. These characteristics of competent practice correspond to the characteristics of competent nurses as identified by Benner (1984), although these new nurses reported that they achieved this level at an earlier time frame than Benner identified. Most participants described their progress in terms indicating practice between the Advanced Beginner and Competent levels, in part because approximately three quarters of them had moved to new practice settings.

Because participants in this study were interviewed after they had between two and three years of nursing practice, and interviewed for the second time up to twelve months later, the maximum amount of nursing practice for these new nurses was close to four years. Most participants were comfortable describing their practice as being at the Competent level. A few who had remained in their original employment settings described their practice in ways that indicated that they were at or moving toward attainment of the Proficient level (not that they used this term to describe their own practice). Those who had moved beyond the Competent level reported being able to reason-in-transition, respond with some intuitive knowing in the client situation, recognize changing aspects of client situations, feel responsible for client outcomes, and know that they can make a difference to client situations.

Although these participants worked in a variety of practice settings, some with higher acuity levels and more diverse client populations than others, they progressed through the stages of Advanced Beginner, Competent, and perhaps Proficient as identified by Benner, Tanner, & Chesla, 1996b). Their self-identified time frame for their progress to the Competent Stage was shorter than identified by Benner, Tanner, and

Chesla, and may reflect a different definition of competence as used by these new nurses in practice. Most new nurses identified competence in practice as relating to the ability to effectively manage assigned client workloads, feel confident that they could do the job, and complete care in a timely, safe, and correct manner. All new nurses in this study identified a point at about six months into practice that was associated with a decrease in experienced stress and was viewed as a turning point in their careers. At this point, they identified a "mediocre" or minimal level of competence that related to carrying out the demands of the job safely within expected protocols, policies, and procedures of the nursing unit under the oversight of more experienced nurses, similar to the "procedural competence" that Ramritu and Barnard (2001) reported. Most identified this 'level of competence' as merely knowing that they could do the job. They recognized their limitations particularly in the area of clinical judgement and decision making. At this point, all acknowledged their inability to provide holistic care (Henderson, 2002) or to make knowledgeable decisions without the aid of their more experienced colleagues.

Most new nurses identified themselves as having achieved a level of "true" competence at approximately twelve to fourteen months into nursing practice. At this point, they believed that their clinical judgement was reasonably well developed and that they were able to make most decisions in nursing practice in a relatively autonomous manner, although all indicated that the norms of their nursing units included continuing dialogue about problematic aspects of client care with senior nurses. At this point, new nurses were experiencing the sense that they could anticipate client issues and outcomes, expected trajectories of client situations and progress, and necessary interventions. Many indicated that they were responding to more subtle but salient aspects of client care, and that their care was more focused on achieving specific desired outcomes for their clients. They perceived that they could "reason-in-transition" (Benner, Hooper-Kyriakidis, & Stannard, 1999) or reason about changes in client situations while providing care and responding appropriately.

During their first six months of practice, new nurses focused on learning the routines of practice and organizational skills of experienced nurses (Casey, Fink, Krugman, & Propst, 2004; Cowin & Hengstberger-Sims, 2006; Ellerton & Gregor, 2003; Boychuk Duchscher, 2001; Benner, Tanner, & Chesla, 1996b; Delaney, 2003; Oermann, 1997). During this period, their stress levels were very high and they often expressed difficulties in meeting the organizational demands of the nursing unit. They learned procedural skills of practice and ways of ensuring that clients got the necessary care within the context of the organization and its needs. Contrary to the suggestion of Ellerton and Gregor that new nurses relied heavily on the experiential knowledge of their preceptors and mentors and did not assert their academic knowledge, these participants indicated their need for academic or formal knowledge. They did not however contradict the experiential knowledge of their nursing colleagues with their formal knowledge, fearing the effect of that act on their relationships with their experienced colleagues. Their needs for formal knowledge were not met in the workplace and thus, new nurses studied their textbooks at home. For them, knowledge was power, a commodity of which they had very little in early practice.

Feedback that new nurses were receiving from more senior colleagues supported their beliefs that they had achieved a level of competence on that specific nursing unit. Many new nurses indicated that this level of competence increased with time as they gained more experience and expanded their own definitions of appropriate nursing care. Their definitions of competence were scaled upwards as these nurses gained experience. On some units, the staff turnover was such that the new nurse with one year of nursing practice experience was midway on the seniority list and was being considered as a senior nurse for scheduling purposes relatively early in practice. These new nurses likely viewed themselves as more competent because of the positions such as charge nurse that they were being asked to assume relative to newer nurses in the practice setting. In other settings, participants continued to be the junior practitioners in the setting, and thus perceived themselves as taking longer to become competent in practice.

The ability to make decisions, and the confidence to do so, is critical to any discussion of clinical judgement. New nurses progressed through several levels of decision making, including a cyclical progression through following direction, thinking linearly, thinking on multiple levels concurrently (multi-tasking), thinking critically, thinking holistically, and thinking collaboratively. This progression was context-dependent, cyclical, and combined with use of practical or experiential knowledge in the process of using clinical judgement. New nurses were dependent on their more senior colleagues to assist them in decision making, and once they were more independent in practice, to validate their decisions or assist them to evaluate outcomes of care appropriately. New nurses relied heavily on the critical thinking skills learned in their educational programs but often discovered that many of their decisions were "thinking-in-action" types of decisions that demanded immediate responses without the time for critical thought or reference to resources. When situations included more time for consideration of decisions and subsequent action, new nurses benefited from coaching in their decision making. Experienced nurses coached new nurses by questioning them or engaging in discussions with them to prompt and support critical thought, the use of experiential knowledge and formal knowledge, considerations of the patient and family situation, and ethics. As Benner, Hooper-Kyriakidis, and Stannard (1999) indicated, experienced nurses assisted new nurses to be actively engaged in clinical situations to promote their development of clinical grasp and clinical inquiry, and with experience, to use clinical foresight to anticipate outcomes. The involvement of experienced nurses is essential to assist new nurses to develop their experiential knowledge and to move their decision making beyond the technical level offered through scientific knowledge alone.

In the first two years of practice, Benner and her colleagues (Benner, 1984; Benner, Tanner, & Chesla, 1996b) identified two stages that are commonly encountered in the career trajectory of new nurses; advanced beginner and competent. The theory of development of clinical judgement identified five distinct stages in the early practice of new nurses as they move from Advanced Beginner to Competent in Benner's Model. These five stages reflect different types of skills and abilities, which Benner (1984) referred to as domains, being emphasized at specific time frames in new nurses' development.

Benner (1984) identified seven domains of nursing practice that undoubtedly develop at variable rates throughout the process of developing competence in practice. These domains include; helping, teaching-coaching, diagnostic and patient-monitoring, effective management of rapidly changing situations, administering and monitoring therapeutic interventions and regimens, monitoring and ensuring quality of health care practices, and organizational and work-role competencies. Benner (1984) and Benner et al. (1996) used a phenomenological approach to identify each participant's current stage of expertise in nursing practice (almost as a snapshot or point in time), rather than exploring the process of developing practice expertise itself.

New nurses indicated that they initially focused on organizational and work-role competencies, administering therapeutic interventions and regimens, and the diagnostic and patient-monitoring functions in the *learning practice norms* stage. The stages in developing clinical judgement in practice likely reflect differential emphasis on these different competencies. New nurses' perceptions that they had achieved competence in practice at six to eight months, *learning practice norms,* may be a reflection of their attainment of competence in specific domains at that time. Domains such as helping, teaching-coaching, effective management of rapidly changing situations, and monitoring and ensuring quality health care practices likely developed later in practice. New nurses incorporated these domains into discussions of their competence in the later stages of *developing confidence* and *consolidating relationships.*

Identifying the various stages in the process of moving from Advanced Beginner to Competent stages may provide opportunities to understand the process in greater detail and facilitate interventions to assist in new nurse development. I must emphasize that this staging is based on new nurse reflections on their own development and has not been confirmed or validated by their more senior colleagues. New nurses however also stated that some of their self-reflection was stimulated by and supported by feedback from more senior nurses and their nurse managers. All new nurses had successfully completed their probationary periods, and when they finally received performance appraisals, their managers also validated their perceptions of developing competence in early practice.

The fact that many new nurses were asked to assume greater practice responsibilities in observation units and clinical leadership in relation to newer nurses also reinforced their perceptions of competence.

Summary

This process and the stages in it emerged relatively early in data collection, and were validated by subsequent participants in their interviews. The experiences of two new nurses who were negative cases could be explained by the developing theory. Once the process of developing clinical judgement was identified and explicated through data collection, analysis, and conceptualization, the theory provided a framework for examining the experiences of subsequent participants. Further data collection and analysis allowed for confirmation of the developing theory and provided for elaboration of the various dimensions of the concepts and the relationships among them.

Understandings of Competence and Clinical Judgement

New nurses' definitions of *competence* and *clinical judgement* are important in the discussion of these findings. I did not impose a definition of either term on the discussions and thus, their reflections on their development are based on their own definitions. They used these terms frequently in their discussions of their professional development but their definitions and examples of both these terms indicated a somewhat rudimentary understanding of these concepts as they applied to their own practices. They nonetheless demonstrated a changing understanding of both terms in practice as they discussed their experiences and how their practices had changed. Their descriptions of their experienced nursing practice incorporated more sophisticated understandings of the terms and reflected higher expectations in their own standards of practice.

Competence

New nurses defined competence as the ability to do the job, initially without qualifications or criteria stipulating the quality of performance. Most new nurses initially focused on procedural and organizational skills, in part because they believed that other nurses judged them by these skills. As one new nurse indicated on her review of the description of new nurse competence, "*some people [new nurses] think they are doing it skillfully [competently] because they don't know any better*" (Dawn). Changing understandings of these terms often reflected the stage of their development. New nurses initially perceived their clinical judgement to be minimal at best, and often not relied on due to lack of confidence in that judgement.

In reflecting on their past experiences, many new nurses qualified the terms *competence* and *clinical judgement,* suggesting that what they initially perceived as competence was no longer seen in that light once they had attained a higher level of practice. As well, as practice standards changed or research was incorporated into practice, new nurses' practices also of necessity changed, a situation that new nurses expected. In their early practice, participants clearly used their own emotional responses to the demands to the practice setting to determine their own level of competence, especially in terms of procedural and organizational competence.

Most new nurses described themselves as competent early in their practice, a finding reported previously in the literature (Ramritu & Barnard, 2001; Meretoja, Isoaho, & Leino-Kilpi, 2004; Garland, 1996). When concepts of competence were explored or measured at this point, as Ramritu and Barnard, and Bjork (1999) did, new nurses tended to equate competence with technical and organizational skill development. These studies however focused on relatively short periods following graduation. In this study, as new nurses gained additional experience, their concepts of *competence* were expanded to include formal knowledge, experiential knowledge, clinical judgement, critical thinking, technical skills, relationships with other nurses and health care professionals, ethical considerations, advocacy, and anticipatory interventions. This conceptualization is more in line with commonly held academic definitions (Goorapah, 1997; Meretoja & Leino-Kilpi, 2001; Meretoja et al., 2004; Eraut, 1998) and practice definitions (Benner, 1984; Benner, Tanner, & Chesla, 1996b; Meretoja, Eriksson, & Leino-Kilpi, 2001). All tend to agree that competence is context-dependent, an expectation of professional practice, and inclusive of cognitive, affective, and psychomotor components.

New nurse descriptions of their own levels of competence tended to move through doing the job safely at the procedural level (around six months of practice), doing the job safely in all aspects of client care (around 12 to 14 months of practice), contributing to client outcomes (around 18 months of practice), and participating in collaborative practice to effectively identify and respond to client situations (around 24 months of practice). As a cautionary note, this study focused on new nurses' self-reported concepts of competence, which may have differed from their more senior nurse colleagues' assessments of their competence (Khoza & Ehlers, 1998). Nonetheless, new nurses did receive feedback from their colleagues that reinforced their perceptions that they were developing their competence in practice.

The stages that these new nurses encountered in the process of developing competence in clinical judgement was similar to those described by Benner (1984) and elaborated on by Benner, Tanner, and Chesla (1996b). MacIntosh (2003) identified similar stages of assuming adequacy, realizing practice, and developing a reputation, although she did not delineate time frames. In this study, the time frame for the development of competent practice is somewhat shorter than Benner's and may reflect changing practice setting demands. In this study, new nurses were required to assume a significant amount of responsibility for their clients, a reflection of health reform and existing organizational structures for patient care. As new nurses indicated, assuming responsibility was a key factor that enhanced their development of clinical competence and clinical judgement (MacIntosh; Thompson & Dowding, 2001).

A confusing issue for most new nurses was the understanding that they had entered practice with entry-level nursing competencies as per their jurisdictional professional associations (AARN, 2000; SRNA, 1999) and yet they were not considered competent in practice by their nurse colleagues or physicians, nor did they feel competent in practice. Because they tended to equate competence with patient safety, and because they acted to protect the safety of their clients, they assumed their own practice was competent early in their careers, as several indicated. They did acknowledge however that their competence in the early stages of their careers (related to patient safety) was dependent on the oversight of their practice by more experienced nurses in their practice settings. This finding would suggest that assessment of new nurses' competence by self-report may lead to over-estimation of their levels of competence and under-estimation of their needs for educational experiences and supervisory support in practice. This finding suggests that assessments of new nurses' competence is best accomplished through observation of their practices and decision making, combined with their self-assessment.

Clinical Judgement

Clinical judgement, which new nurses defined as "knowing what to do and when to do it," also changed with experience. As Goorapah (1997) indicated, clinical judgement was associated with clinical credibility, a state to which new nurses aspired as they developed their practices. Although initially new nurse definitions of clinical judgement were somewhat superficial, their descriptions of changes in their practices with experience demonstrated more advanced understandings of both competent clinical practice and clinical judgement. With experience, participants expanded their functional understandings of clinical judgement to include knowledge of the usual practices of the nursing unit (the unit culture, values, and beliefs), knowledge of the client population, and knowledge of the usual trajectories of client conditions and situations. Although they themselves focused on procedural and organizational skills early in practice, many suggested that decision making was actually the key indicator of their developing competence in nursing practice. They also expressed concern about the difficulties that they encountered in this process.

Clinical judgement involves assessment of current and past conditions, the management of patient problems, and the prediction of future events (Cioffi, 2001; 2002), or how nurses come to understand the client situation and attend to salient cues (Benner, Tanner, & Chesla, 1996b). Many new nurses indicated that early in practice, their clinical judgement was based on general theoretical knowledge gained through their educational programs. New nurses stated that through experience, they gained practical knowledge that increased their abilities to evaluate options and make decisions more effectively. New nurses did not rely exclusively on their experience, or the experience of others, to develop their clinical judgement. They expressed the need for specific formal knowledge related to the care of their client populations. They also reported that other than the orientation programs, very few in-service or continuing education opportunities were available to assist them to develop their formal knowledge in the first two years of practice.

New nurses expressed disappointment in the amount of scientific or research knowledge incorporated into nursing care on general nursing unit and found that for a number of reasons, they too relied on experiential rather than scientific knowledge. Since they did not have experience to rely on, new nurses became dependent on the experiential knowledge of their senior colleagues. The culture of their general nursing units was, for the most part, supportive of new nurses and senior nursing staff indicated willingness to answer questions. On many units, this consultation continued as a practice norm beyond the point where new nurses were dependent on it.

New nurses had an expectation of needing a great deal of assistance until approximately six months into practice, at which time they expected to practice safely with confidence, a finding similar to that of MacIntosh (2003). This expectation may have arisen from discussions of Benner's theory (Benner, 1984; Benner, Tanner, & Chesla, 1996b) during their educational programs, or from advice from previous nursing graduates. This point became significant in terms of new nurses' expectations of themselves, which was also reflected in the expectations of more senior nurses; both parties expected new nurses to ask fewer questions after six months of fulltime employment. The process of developing clinical judgement illustrated that, although the nature of new nurses' questions changed from the need for information to the need for validation, they continued to need the advice and support of experienced nurses as they refined their practice and gained confidence in their abilities to make effective clinical decisions. The reluctance of some experienced nurses to continue their ongoing support of new nurses after six months created difficulties for them and literally slowed their development of confidence in their second six months of employment.

Few new nurses acknowledged the incorporation of their own or agency goals, values, or expected client outcomes into the process of making clinical judgements, indicating instead that knowledge was the key factor in their clinical judgement. Hastie (2001) described the process of clinical judgement as attempting to integrate multiple often conflicting cues of what is happening in a situation and predict outcomes of specific action choices when evaluating these options. In evaluating choices, people combine desires including values, preferences, goals, and objectives with beliefs including expectations, knowledge, and means to come to a conclusion and prediction of best outcome (Hastie), and thus best choice. Although new nurses experienced the conflicting values of educational programs and nursing workplaces, they rarely acknowledged the dilemmas they experienced in *evaluating* or applying values to clinical judgement and decision making. New nurses were very sensitive to their nursing units' cultures and practice norms, incorporating these values with the values learned in their educational programs. In order to 'fit in', most new nurses adopted, or at minimum, assumed the values positions of their experienced colleagues in decision making, and thus, their clinical judgements incorporated the prevailing norms of the nursing unit.

With experience, new nurses did learn the usual courses of conditions of their clients, important cues in client situations, appropriate nursing responses, and expected or desired outcomes of their nursing interventions. They acknowledged their foundational professional knowledge in the process of learning experiential knowledge and were very interested in incorporating scientific knowledge with their practical knowledge (Kikuchi & Simmons, 1999), a stance not always supported by their experienced colleagues. Acquiring theoretical and practical knowledge also involved applying, refining, and extending knowledge to client situations, and in doing so, developing new knowledge for them (Brykczynski, 1999).

New nurses also had personal experiences that added personal knowledge to their nursing practice (Arbon, 2004; Carper, 1978), knowledge that they used to individualize client care. As well, nurses have manners of acting that tend to be consistent with relatively stable dispositions or personality traits (Richardson & Fenstermacher, 2001). A type of knowledge that new nurses gained through experience was categorized as "knowing the patient" (Benner, Tanner, & Chesla, 1996b; Liaschenko & Fisher, 1999; Tanner et al., 1993; Jenks, 1993; Radwin, 1996). New nurses brought this integrated knowledge from a variety of sources to bear on their decisions.

In the early phases of their careers, during the period that they were learning to work in specific workplaces with particular practitioners, they relied heavily on the experiential knowledge of their senior colleagues. In doing so, they incorporated unit values and beliefs along with senior nurses' practice knowledge. In the stage *learning practice norms,* new nurses needed to learn organizational skills and 'getting things done," connecting clients with needed resources, and other co-ordination skills that make hospitals work for patient care (Liaschenko & Fisher, 1999). With more experience, their knowledge of the particular person, values and beliefs, expected utility of various

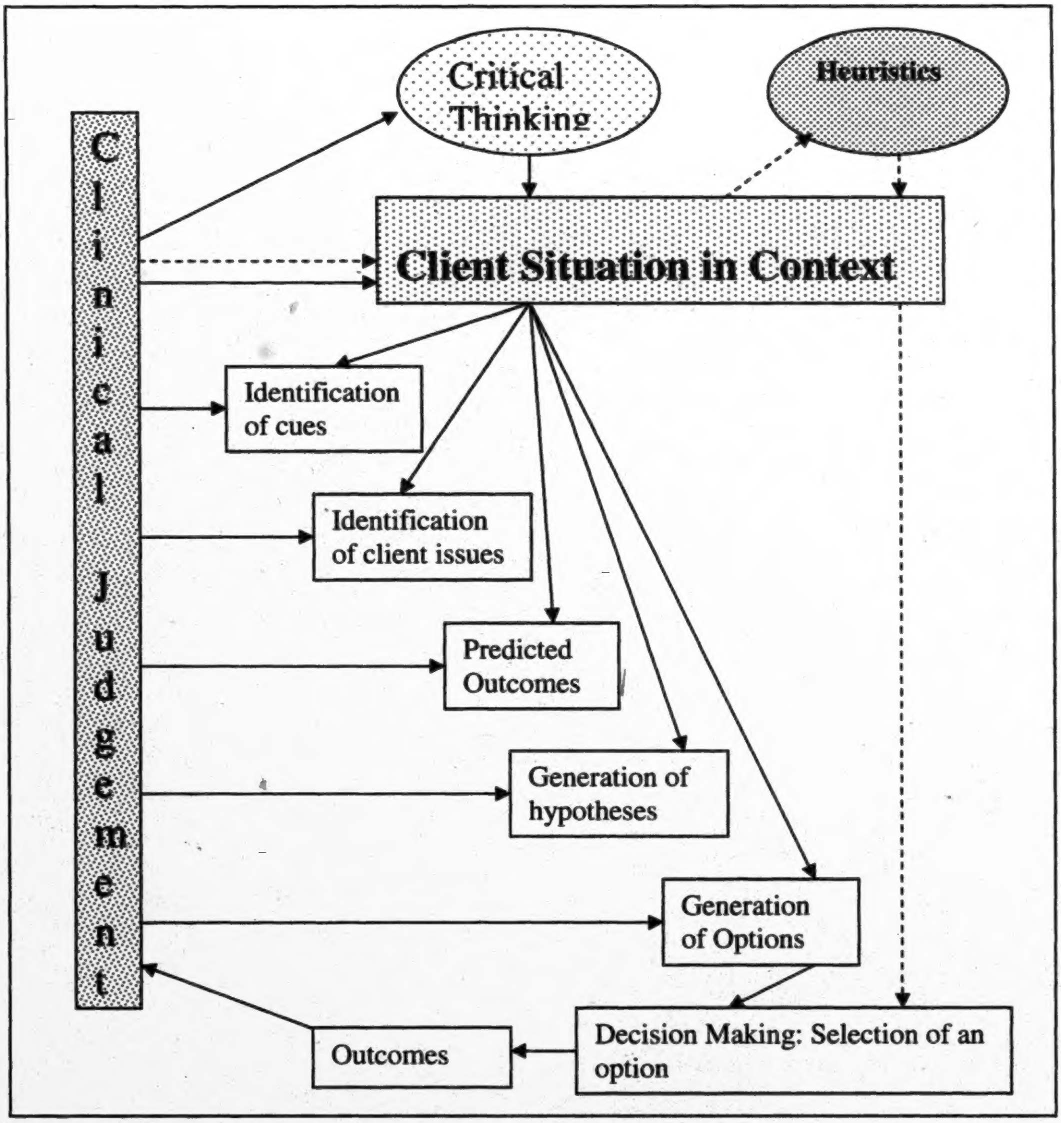
Critical Thinking
Heuristics
Clinical Judgement
Client Situation in Context
Identification of cues
Identification of client issues
Predicted Outcomes
Generation of hypotheses
Generation of Options
Decision Making: Selection of an option
Outcomes

Figure 4: Relationship of heuristics and critical thinking in decision making

options, heuristics, and in those situations where conflicts became apparent, critical thinking.

New nurses believed that they used their critical thinking skills extensively, particularly after they had learned the practice norms of the unit (See figure 3). They had never ceased to use their critical thinking skills entirely but found that at about six months of practice, once they realized that they were able to provide the required care at a safe level, they became more confident and emotionally more relaxed. They then consciously enacted critical thinking skills to address client situations, a finding similar to that of Boychuk Duchscher (2001), Oermann (1997), and Jasper (1996). Through their critical thinking skills, they synthesized information in the client situation, identified issues, devised their hypotheses of what was occurring in the client situation, generated options, and predicted outcomes. As many indicated, in the first year or so, they often needed the advice of their more senior colleagues to assist them to recognize cues in the client situation. They also benefited from the role modeling of critically-thinking senior nurses who literally showed them how to think about client situations in daily practice. Following critical analysis of the client situation, new nurses and their senior colleagues generated possible approaches to the client situation, often using a hypothetic-deductive approach. At this point, they used their clinical judgement to evaluate options for practice, and then engaged in decision making to select an option for action. Later in their nursing practice, new nurses used heuristics developed from their own experience or the experience of others to bypass the critical thinking process and selected options for action efficiently and without critical thought.

Decisions can be difficult for new nurses when the full range of options is unknown, when the decision maker has limited experience with similar decisions, if the decision maker has difficulty ascribing value positions to specific alternatives, or if expected outcomes are uncertain (Thompson & Dowding, 2003). A high level of uncertainty, as may arise in the previous situations, prompt new nurses to lack confidence in their decision making and thus, to defer to the decisions of experienced nurses. New nurses have difficulty in their clinical judgement for these reasons. They identified clinical reasoning, clinical decision making, and clinical judgement as the primary indicators of developing competence and expertise in clinical practice. In practice after they had gained confidence and consolidated relationships with colleagues, clients, and families, new nurses valued the challenges offered by uncertainty in practice. As identified by Thompson and Dowding (2001), professional learning often occurred in situations of uncertainty, where heuristics were not available for practice and critical thinking skills and reflection were needed to identify options for action. After approximately eighteen months of practice, new nurses wanted some degree of uncertainty and challenge; without challenge, they often perceived that they were no longer learning and sought other opportunities or employment.

Evidence for Nursing Practice

I explored the sources of evidence that new nurses use for their practices. They entered practice with what they considered to be sound research-based theoretical knowledge from their educational programs. They had confidence in their knowledge on entry to practice but quickly realized its inadequacy in dealing with the complex issues of particular patients on their assigned nursing units. Although new nurses continued to value their theoretical preparation, they also acknowledged the practical wisdom of their senior colleagues. In many instances, they became aware of the unit culture that valued experiential knowledge more highly than research knowledge. Most new nurses did not see their senior colleagues using research in practice, a finding that corresponded to the work of Estabrooks (1998), Rycroft-Malone et al. (2004), and Bryar et al. (2003). Several new nurses were mentored to use scientific evidence in practice by their more experienced colleagues but this valuing was often an individual characteristic rather than a unit culture or norm of practice. New nurses who moved to intensive care units such as Emergency or Coronary Care commented that the culture of evidence-based practice was much more apparent in these settings.

In *Learning practice norms,* new nurses were overwhelmed by the demands of the work environment and were dependent on experienced nurses to assist them in decision making. They continued to value scientific knowledge for its application to client situations and used their textbooks from their nursing programs to review client conditions, diagnostic tests, treatments, medications, and prognoses. They equated knowledge with power in a situation in which they felt somewhat powerless particularly in the early period of their employment. They also found that in the challenging work environment where they were attempting to assume full client assignments, they did not have time to access scientific sources in hospital libraries, nursing unit resources, or on the Internet (Estabrooks, O'Leary, Ricker, & Humphrey, 2003; Thompson et al., 2001b). The preferred and more accessible source of knowledge was more experienced nurses (Rycroft-Malone et al., 2004; Estabrooks et al., 2003; Thompson, 2003; McCaughan, Thompson, Cullum, Sheldon, & Thompson, 2002). New nurses quickly realized that they lacked understanding of the context of their clinical practice, and were uncertain whether the research evidence was applicable with the specific clients in the new context. As well, inconsistencies in research findings complicated the process of determining appropriate research evidence for practice in the specific setting (French, 2005).

Most new nurses continued to value scientific knowledge. In the first six months, they used their textbooks at home to review client situations and prepare themselves for the next experience with similar clients since they recognized their own lack of knowledge in client situations. Nurse managers and nurse educators should ensure that up-to-date resources specific to the client population are available to new nurses *in* the work place and that new nurses are supported to find time to use these resources in practice. More experienced nurses could model the use of such resources to support practice at all levels of expertise in practice.

New nurses considered several sources of knowledge to be evidence-based practice, an assumption that may or may not be true. New nurses considered procedure manuals and policy manuals to be evidence-based, regardless of their currency (Rycroft-Malone et al., 2004), and were dependent on such sources for information regarding procedural skills. Initially, they also considered the experiential knowledge of more experienced nurses to be evidence (Jenks, 1993; Estabrooks, 1998; Downie et al., 2000; Ray & Mayan, 2001; Fawcett et al., 2001; Johnson & Ratner, 1997; Kikuchi & Simmons, 1999; Estabrooks, 1999a; Flaming, 2001), although they acknowledged that several of their more senior colleagues were unsupportive of the use of research information in practice. With experience, they questioned the practice norms and usual practices of their more experienced colleagues, particularly in the use of research. The suggestion that new nurses would be able to change the culture of nursing units to one of evidence-based practice demonstrates a lack of understanding of the power, influence, and credibility of new nurses in the work place or of the process that they are experiencing as they learn to practice nursing (Ferguson & Day, 2004). This change is only likely to happen if and when new nurses maintain their value commitments to evidence-based practice, gain experience and credibility, and reach a critical mass on the nursing unit.

With experience, new nurses were better able to judge the value of specific research evidence to particular clients within a particular context and several began to take research articles to their workplaces for consideration by other experienced nurses. They generally were able to change their own approaches to client care based on research evidence but may not have had the stature on the nursing unit to effect changes in culture or nursing practices. New nurses were open to the use of research evidence in practice and valued the journal articles that colleagues, physicians, and nurse educators provided on the nursing unit. They were relatively comfortable reading such materials and were willing to modify practice according to scientific evidence. Within the first year of practice, they rarely brought research articles to the nursing units although they may have used them at home. They did not use libraries that may have been available in hospitals due to the difficulty of leaving units, and found that most practice questions required immediate intervention. Searching for evidence for practice while caring for clients was not possible for them (Ferguson & Day, 2004). In the event that nursing leadership introduced and sustained evidence-based practice in the workplace, new nurses would likely embrace the change. In terms of power and influence however, new nurses are unlikely to be change agents for evidence-based practice within the first two years of nursing practice.

Workplace Facilitators and Barriers to New Nurse Development in Practice

I addressed factors in the practice environment of new nurses that supported or hindered their development of clinical judgement. New nurses were very aware of their learning needs on entry to practice and acknowledged their reliance on their more experienced colleagues to learn the practice of nursing in a specific agency with a specific population. They were very appreciative of thorough orientation programs, and in particular for preceptored shifts early in their employment as graduate nurses or registered nurses. Orientation programs that consisted of one or two weeks of classroom presentations and up to twelve preceptored shifts were considered very helpful in new nurse orientation to the setting (Basler, 1993; Beecroft, Kunzman, & Krozek, 2001; Marcum & West, 2004; Stinson & Wilinson, 2004). In those situations where new nurses were employed on nursing units where they had completed their preceptored student experiences, this process was often omitted. New nurses in this situation were concerned that they were not orientated adequately to the role of the registered nurse within the context of practice. They valued the preceptored orientation experience and where it was lacking, provided examples of situations where their knowledge of registered nurse activities particularly in areas of decision making and judgement was inadequate.

New nurses were very aware that they were entering an existing work group, a community of practice (Wenger, 1998), and that each nursing unit had a specific unit culture with some aspects in common with other nursing units within the organization and other aspects that were unique (Schein, 1992, 1993; Martin, 2002). Some new nurses were favorably impressed with the culture of the unit from their student experiences and had in fact requested employment on that unit. Others were assigned to new and unfamiliar nursing units. New nurses indicated that their more experienced colleagues became their learning network in practice. They acknowledged their dependence on senior nurses to learn the practice norms of the nursing unit, the needs, conditions, illness trajectories, and expected outcomes for the client population, and relationships with other health care professionals. They literally needed the social network to learn how to practice nursing within that specific organization. Although they could have gained the same knowledge through their own experience over time, the demands of the workplace forced them to become competent in practice as quickly as possible. They needed to rely on the senior nurses in the practice setting. New nurses needed senior nurses' experiential knowledge and were dependent on mutual engagement in the workplace to develop their professional identities and knowledge (Wenger, 1998).

New nurses valued the reification (Wenger, 1998) of the cultural values and norms of the work place in concrete forms that assisted them to function effectively within those norms. Policy and procedure manuals were extremely helpful and provided needed guidance in practice for new nurses. They also valued work sheets, algorithms, and critical pathways that incorporated the nursing unit values and practices, and provided them with direction for shift reports, client assessments, and physician queries. Although new nurses felt they no longer needed these tools later in practice, many of them commented on their usefulness early in their careers.

All new nurses indicated that the social environment of the nursing unit was critical to their development, starting with how they were welcomed to the setting. Those new nurses who attended unit social events indicated that they 'got to know the other nurses in a different light' and that social connection facilitated their work relationships in practice, similar to the findings of Kelly (1996) and MacIntosh (2003). Nine participants believed that they had been or were being mentored by senior nurses with whom they had developed a 'connection' and four others described their nursing units as 'mentoring environments' where many of their colleagues offered mentoring support (Broome, 2003). New nurses needed a supportive learning network for development of their clinical judgement. They recognized their own vulnerability in the work place and acknowledged that they did not have the personal power or influence to change the work place; thus, they needed to adapt to it. They were seeking a work place that supported them in their commitment to lifelong learning, valued holistic and individualized care, included research evidence along with experiential knowledge, and recognized the process they were experiencing as they developed their clinical judgement in practice.

Those who were mentored indicated that they chose mentors who demonstrated the kind of nursing care to which they aspired and who were open to their questions. Many of these mentors supported holistic evidence-based nursing care, provided nursing care at the expert level, maintained respectful relationships with physicians and other health care professionals, and encouraged critical thought. These mentors encouraged new nurses to embrace the same goals for nursing care (Santucci, 2004). New nurses wanted mentors who would help them achieve their ideal of nursing practice as they envisioned from their educational programs, recognizing that their ideals would be difficult to achieve and needed to be adapted to the workplace.

These new nurses all reported nurses in their work places who they considered to be ‘ward bullies’. Most new nurses had been forewarned about those nurses who “eat their young” as a metaphor for the psychological harassment that some senior nurses effected on their new colleagues. Although they were prepared for such harassment (Randle, 2003; McKenna, Smith, Poole, & Coverdale, 2003; Boychuk Duchscher, 2001), most indicated that they did not experience as much distress as they expected. These new nurses categorized as the following experiences as harassment; unkind remarks, failure to assist them, any criticism of their practice, verbal abuse, exclusion from the social group, intimidation, humiliation, or disinterest. This harassment often occurred within the context of interprofessional conflict including the relationships between new nurses and LPNs or physicians, or with more experienced RNs especially those prepared at the diploma level. New nurses identified some relatively innocuous situations as hurtful, and specified the importance of supportive mentoring individuals within the work place. Considering the effect of bullying on new nurse absenteeism and decisions to leave the employing unit (McKenna et al., 2003) and from this study, on their development of clinical judgement, issues of psychological harassment directed toward new nurses, or their perceptions of such, are barriers to the development of clinical judgement in practice.

New nurses wanted to be employed by learning organizations (Schein, 1992; Senge, 1990) and perceived that for the most part, they were not. These new nurses acknowledged their own learning needs and wanted opportunities to learn substantive knowledge to care for clients. They sought this information through their available resources at home and occasionally at work but indicated that they needed the support of their nurse managers and nurse educators to learn that knowledge that would give them greater confidence in caring for their clients. In particular, new nurses valued in-service presentations, education days, and conferences that provided more in-depth information specific to their client populations. Most of their work places provided very few learning opportunities for new nurses. In their first two to four years of practice, most new nurses had attended only one conference and several had not attended any. In-services were infrequent and when they were offered, new nurses found them difficult to attend while trying to provide care to clients in an organized manner. New nurses wanted employing organizations that were in effect learning organizations that invested in their new employees through the provision of formal learning opportunities on an ongoing basis throughout their employment as Registered Nurses.

Gopee (2002) described this process of investing in the education of employees from the organizational perspective as the creation of 'human capital' and the facilitation of an effective social group that supports learning for one another as 'social capital.' These two concepts are important for new nurses who need the commitment of the organization and their community of practice to their professional learning. MacIntosh (2003) identified the importance of working context on the development of professional identity and commitment to practice while Gillis, Jackson, and Beiswanger (2004) demonstrated its importance in the development and retention of nurses in practice. Effective orientation and integration of new nurses into the workforce has economic as well as professional benefits in terms of better prepared nurses who are more satisfied with the work environment and are retained in the setting (Beeman, Jernigan, & Hensley, 1999). In situations where human and social capital are not effectively developed, new nurses continue to learn to practice nursing, albeit at a slower pace. Unfortunately, their socialization to nursing and nursing identity within an organization that does not support professional learning perpetuates this ineffective model for future new nurses and leads to retention problems in the setting.

Contributions of Nursing Education

I elicited factors from the educational experiences of new nurses, both basic nursing education and continuing education programs, that supported or hindered the development of their clinical judgement. Question number six addressed how new nurses perceive that their clinical judgment was developed during their educational program. I will address these two questions together as they could not be easily separated.

All new nurses in this study, who were educated in four different baccalaureate programs, expressed their satisfaction with their educational programs and believed that they were prepared very effectively to enter the practice of nursing. It is interesting to note that these nurses were interviewed after two years of practice, once they had effectively developed their professional practices. If I had explored the same questions after three months of practice during those periods of stress and lack of confidence, I may have received different messages.

Most new nurses felt that they had been adequately prepared with foundational knowledge as the basis for their professional practice. The exception was for some graduates of programs using Problem-Based Learning (PBL), who expressed concern about their lack of science courses such as Anatomy and Physiology, Pharmacology, and Pathology. All new nurses including PBL graduates perceived nonetheless that they were adequately prepared to enter practice and that they had developed their clinical judgement in nursing practice in similar manners. Rideout et al. (2002) demonstrated that there were no significant differences between graduates of PBL and conventional programs in their self-reported preparation for practice, clinical functioning, and nursing knowledge. As compared to graduates of conventional programs, PBL graduates were significantly more satisfied with their educational programs and reported higher but non-significant differences in levels of preparation in communication skills and self-directed learning. Graduates of conventional nursing programs in this study indicated that they preferred those learning situations that included patient care scenarios that required self-directed learning and critical thinking (Wagenaar, Scherpbier, Boshuizen, & Van Der Vleuten, 2003; Williams, 2001). Graduates perceived that these methodologies prepared them more effectively for practice, as Forbes, Duke, and Prosser (2001) demonstrated. These findings support curriculum development that focuses on increasing active learning through PBL, case studies, and scenarios.

New nurses were very positive about their educational programs. Graduates of conventional programs expressed concerns about communication courses in their programs but following two years of practice, expressed appreciation of such courses for the provision of holistic care. This finding suggests that faculty in conventional programs could assist students to identify relevance of the content of these courses to nursing practice, perhaps by involving students in interactions with clients early in their programs. All new nurses in this study indicated confidence in their holistic care, communication skills, and community-based practice as a direct result of their educational programs. All new nurses valued their critical thinking skills from their educational programs, which they often related to practice in an evidence-based manner. All graduates of both PBL and traditional programs perceived that they were well prepared in terms of evidence-based practice (Clark Callister, Matsumara, Lookinland, Mangum, & Loucks, 2005). From their discussions about the benefits of their educational programs, it is evident that new nurses had adopted the cultural values of baccalaureate educational programs and taken them into practice as professional values (Delaney, 2003; Howkins & Ewens, 1999).

New nurses identified their clinical experiences as the most important part of their educational experiences. All new nurses indicated that they generally focused on procedural skills in their student clinical experiences. Their educators however focused on clinical skills of critical thinking, decision making, evidence-based practice, and holistic care, thus forcing students to address these skills in student clinical practice. They believed that this focus assisted them to develop their clinical practice after graduation (Ironside, Diekelmann, & Hirschmann, 2005; Twibell, Ryan, & Hermiz, 2005; Howkins & Ewens, 1999; Garrett, 2005). As much as they valued their clinical experiences as students, many provided suggestions for improvement including reducing the frequency of re-assignment of students to new clinical experiences, increasing the size of patient assignments for students, and involving students in decision making with RNs in practice. Several students indicated that they felt over-protected as students in clinical experiences, a clinical teaching approach that may have decreased their confidence on entry to practice (Nokes, Nickitas, Keida, & Neville, 2005). This observation is of particular importance when one considers new nurses' beliefs that they needed to be responsible for client care in order to develop their practice and clinical judgement as RNs, and presumably as students.

Regardless of the clinical practice setting, new nurses highly valued their precepted student experiences, in part because of their opportunities to interact with their preceptoring nurses during decision making. These experiences provided students with opportunities to engage in professional socialization and skill development while they were students (Clark, Owen, & Tholcken, 2004; Ferguson, 1996; Howkins & Ewens, 1999;), and thus to enter practice as a more knowledgeable graduate with less polarized views of practice and better understanding of the RN role. New nurses referred to their preceptored experiences as students frequently and indicated preceptors' value in preparing students for graduate practice (Olson, et al., 2001; Beecroft, 2001). They had the same positive reaction to their preceptored experiences as new nurses in orientation. As much as educational programs value the preceptored clinical courses that they usually offer in the senior years of their programs, they also need to acknowledge the pressures that preceptored students place on nursing units and nursing staff. The need for preceptor preparation and support becomes a very important consideration for educational programs (Chapple & Aston, 2004; Ferguson & Hawke, 2002).

New nurses felt that they started to develop their clinical judgement in their student clinical experiences, particularly in experiences where clinical faculty asked questions to stimulate critical thought about client care. They considered their theoretical preparation as foundational knowledge for their professional practice and the skills learned in clinical experiences in their educational programs as essential to their development as professional practitioners. New nurses indicated that they learned more as students from the clinical decisions that they were required to make in student clinical practice as compared to the preparation they conducted prior to their experiences (Wagenaar, et al., 203). Of interest, most new nurses indicated that they did not use their skills of critical thinking, evidence-based practice, or holistic care effectively in their first six months of practice while they learned the practice norms of the new setting. During the period of *Learning practice norms,* they focused more on their procedural and organizational skills, and the ways of practice of the new practice setting. These higher level professional skills re-emerged in their practice once they had gained more confidence and started to practice with greater autonomy.

Many perceived themselves as competent in student practice, a factor that they perceived assisted them to approach professional practice with greater confidence. Their perceptions of competence were supported by their preceptored clinical experiences and further enhanced by their preceptored experiences as part of orientation to the professional nursing role. Entry to more independent practice however severely challenged their perceptions of competence and undermined their levels of confidence, unless they were enrolled into a formal mentorship program to facilitate transition (Nelson, Purdy, & Godfrey, 2004).

New nurses readily acknowledged the importance of the knowledge they constructed through their clinical experiences and formal classroom experiences as foundational to their developing practice knowledge. They made occasional references to student experiences in discussing their development but for the most part, focused on their experiences in their employment settings. All new nurses discussed the ‘steep learning curve’ upon entering nursing practice on a specific unit. In particular, they focused on the practice norms on the specific unit, client populations with their specific practice issues, and the clinical decisions involved with providing care for a specific client population. Although they undoubtedly used practice knowledge gained through their student experiences, especially if they had been preceptored on the same nursing unit, they all acknowledged being so overwhelmed by their learning needs in a new role on a new nursing unit and of necessity, focused on that learning.

Recommendations

Based on the Theory of Developing Clinical Judgement in Practice, the stages evident in that development, and the themes that are evident in the analysis of the data, I make the following recommendations for:

Practice. Nurses in practice, both experienced nurses and those with less experience, constitute the most significant portion of the learning network for new nurses. As such, the following recommendations apply to these nurses.

- A welcoming and supportive social climate of the nursing unit has significant impact on the learning process of new nurses.
- Understanding the learning process in which new nurses engage to develop their clinical judgement will provide direction for the nature of direction or dialogue that new nurses need in the process of developing their clinical judgement.
- Engaging in confidence-supporting interactions with new nurses.
- Mentoring new nurses facilitates their engagement in the work of the nursing unit, supports them in their learning process, facilitates their interactions with other nurses, physicians, and health care professionals within the organization, and ensures their exposure to the practice norms and values of the nursing unit and organization.
- Nursing practice values such as holistic and individualized client care, respectful co-operative interactions with clients, families, and health care professionals, evidence-based nursing practice, and continuity of care must be modeled in practice in order to support new nurses in their engagement in these practices.

- To ensure client safety, experienced nurses should provide oversight of new nurses' client care in a way that ensures continued professional development of the new nurse.

Administration. Nurse managers, and as their proxies, nurse educators, have significant effect on the creation and maintenance of the culture of nursing units, management of unit resources, evaluation of new nurse practice, provision of leadership, and maintenance of nursing practice standards in the setting. They are probably the most significant people in terms of the recruitment, orientation, support, and retention of new nurses in the work place.

- Creation of learning environments on the nursing unit supports new nurses and their more experienced colleagues in their professional development in nursing practice.
    - Encouraging the ongoing support of new nurses and more experienced nurses through the social learning network on the nursing unit.
    - Providing orientation programs that focus on the development of technical, cognitive, and decision making skills needed to provide care for the client population.
    - Providing for validation or dialogue of new nurse decision making and linkage with client outcomes.
    - Providing extended learning experiences that enhance nurses' practice with the specific client population i.e. dialysis, operating room observation, and home care visits.

- ☐ Providing evaluative feedback both formal and informal that is appropriate to developmental levels of new nurses will assist them in their professional growth.
    - Combining new nurse self-assessment of progress with observational assessment and dialogue concerning clinical judgement and decision making skills.
- ☐ Developing human resource policies that support the development and retention of new nurses in practice, in conjunction with the Human Resources Departments of their organizations.
    - Providing resources and opportunities for continuing education.
    - Managing workload assignments at safe levels for new nurses.
    - Providing fulltime employment on a single nursing unit as a preference for new nurses.
    - Formalizing the process of providing evaluative feedback to new nurses at regular and specified intervals.
    - Acknowledging the importance and role of experienced nurses as mentors for new nurses.
    - Addressing issues of new nurse harassment proactively.
- ☐ Acknowledging and supporting mentoring behaviours of experienced nurses within the work group on the nursing unit.
- ☐ Retaining new nurses by:
    - assisting them to manage their stress in early practice,
    - providing support and encouragement in their practice,

  - increasing their levels of responsibility slowly and appropriately to their developmental level,
  - maintaining a level of challenge in practice through provision of additional responsibilities appropriate to their developmental level, and
  - acknowledging their continuing needs to learn in practice by supporting attendance at conferences and workshops.
  - supporting new nurses in the delicate balance between confidence and challenge in their practices.
- ☐ Facilitating a practice environment that encourages collaboration and a team approach among health care professionals.
  - Involving physicians and other health care professionals in creating respectful and supportive learning environments for all practitioners.
  - Encouraging a team approach to enhance client outcomes.
- ☐ Creating clinical leadership opportunities for nurses beginning at approximately 18 months of practice, including preceptoring and mentoring students and new nurses, involvement in staff orientation, committee work, and educational leadership.
  - Investing in the professional development of nurses through ongoing continuing education opportunities at all levels of expertise.
- ☐ Providing educational resources including journals, textbooks, and access to the Internet to support continuing learning and evidence-based practice.
- ☐ Supporting the role of the nurse educator in provision of up-to-date research to support best practices and evidence-based practices in the setting.

- Provision of an appropriate staffing mix that allows for appropriate oversight of the practice of new nurses and their easy access to experienced nurses who can assist them in their decision making.
- Providing of counseling or debriefing for nurses following negative outcomes of nursing care on the unit, with a focus on learning best practices.

Nursing education. Nursing education involves the preparation of nursing students to enter practice, often referred to as nursing education, and the provision of educational experiences in practice, often differentiated by the term continuing education. Faculty in nursing education programs can initiate the following approaches:

- Choosing teaching methodologies such as PBL, discussions, client testimonials, and clinical experiences that support students' active involvement with the content.
- Using scenarios in the classroom to encourage critical thinking and stimulate the process of developing clinical judgement and decision making.
- Providing more realistic client assignments during the senior courses, under the close supervision of faculty or precepting staff nurses.
- Employing preceptored clinical experiences to facilitate transition to practice.
    - Providing opportunities for students in precepted clinical experiences to manage the regular caseload of a new RN under the supervision of the precepting nurse.
- Using longer clinical experiences and preceptored clinical experiences to allow students to learn practice norms of the nursing unit and to participate more actively in decision making while still a student.

- Involving Registered Nurses in clinical practice to discuss client issues, options, and decision making with nursing students during their clinical experiences.
- Providing opportunities for nursing students to address content such as Anatomy and Physiology, Assessment, and Pharmacology in higher acuity or more complex client care rather than addressing the content only in early parts of the nursing program.
- Preparing students for transition to practice through discussion of the process of developing clinical judgement in practice, including discussions of the changing nature and rate of learning in practice.
- Jointly with nursing service, preparing experienced nurses as preceptors and mentors for new nurses through continuing education sessions that enhance their supportive and teaching skills, and their understanding of the development of new nurses.

Clinical nurse educators can use the following strategies in offering continuing education sessions for new nurses in clinical practice:

- Scheduling of frequent education days for new nurses, i.e. one eight hour shift per month over the first year, to assist them to develop the formal knowledge needed for care of the client population.
- Ensuring provision of up-to-date evidence-based resources for new nurses (and more experienced nurses in practice).
- Avoidance of "just in time" programming for new nurses that may not allow them to understand and integrate information into their practices before they are responsible for client care.

  - Acknowledging the organizational challenges that new nurses experience early in practice means that clinical educators understand the difficulties new nurses experience in attending in-service offerings.

- ☐ Involvement of physicians and other health care professionals into continuing education programming for new nurses may increase the culture of learning in professional practice and professional relationships in practice.
  - Involving all health care professionals in the learning environment and ensuring that all health care professionals understand the process of developing clinical judgement will facilitate an effective learning network for new nurses.
- ☐ Involvement of senior nurses in role modeling evidence-based practice and critical thinking in practice may assist new nurses in their decision making and development of clinical judgement.
- ☐ Since clinical educators may be key individuals in setting cultural norms for evidence-based and holistic practice, they need to be aware of their role in modeling evidence-based practice, holistic care, critical thinking, and decision making.
- ☐ At appropriate points in the careers of new nurses, provision of educational programming that focuses on higher order skill development such as decision making, critical thinking in practice, teamwork, collaboration, clinical leadership, clinical judgement, and nursing knowledge in practice.

  - Recognizing the developmental level of new nurses may assist educators to provide sessions addressing the correct level of skill learning at particular points in their development.
  - Acknowledgement of a culture of learning involves provision of learning opportunities throughout the careers of nurses, not just during their orientation periods where procedural and organizational skills are paramount.
- ☐ Programming assistance for experienced nurses to develop their mentoring skills and assistance for them to understand how to more effectively mentor new nurses in practice.

Research. Understanding the process of developing clinical judgement in nursing practice, as derived from the Theory of Developing Clinical Judgement in Practice, leads to several researchable questions arising from this work. These questions need to be addressed in the future and constitute a program of research around the issue of developing clinical judgement in nursing practice;

- ☐ Developing key indicators about the stages in the Development of Clinical Judgement in Practice.
  - Preparing a screening tool to assess new nurse progress in practice.
  - Psychometric testing of the screening tool.
- ☐ Assessing the level of new nurse development of clinical judgement on clinical decision making and client outcomes.
  - Direct observation of the practice and decision making of new nurses.

    - Comparing new nurse and experienced staff nurse perceptions of new nurse levels of competence.
- Assessing the effect of organizational culture on new nurses' enactment of evidence-based practice.
- Assessing the effect of PBL in the nursing education program on the new nurse's development of clinical judgement in practice.
    - Evaluation of the effect of nursing unit culture on the critical thinking skills and clinical judgement of new nurses who have experienced PBL in their undergraduate programs.
- Analyzing the effect of a learning culture on the development of clinical judgement in practice.
- Analyzing the effect of role modeling by senior nurses in effecting evidence-based practice by new nurses.
- Analyzing the effect of having being mentored on the mentoring behaviours of experienced nurses toward new nurses in clinical practice.

Limitations

This study did not address the actual performance of the nurses who participated in the study. I relied on participants' self-reports of the process they have undertaken to develop their own clinical judgement, and their own definitions of competence in nursing practice. I believe these participants have openly discussed this process and have insights into the challenges, difficulties, and successes they experienced in practice. I have not attempted to corroborate their self-assessments of competence in clinical judgement with their peers or supervisors.

I was unable to recruit a participant who had left nursing as a result of early negative experiences in the nursing profession. Participants made reference to such individuals but were unable to identify any such nurses from their own experiences. I believe that such a participant would have contributed a unique perspective that could have contributed to the richness, density, and utility of the resulting theory. I question whether such individuals actually exist, and it is more likely that nurses with negative experiences have moved to other nursing units. I did recruit an individual with this experience and have incorporated that nurse's experience into the findings.

I used telephone interviews with five nurses for their first interviews and most of the second interviews with 15 participants. I acknowledge the risk of losing the non-verbal component of these interviews, although I do not believe that this interviewing strategy affected the richness and density of the data provided by these participants.

I did not involve new nurses working in specialty areas. Because most nurses in community practice and specialty areas of practice are often required to have several years of general nursing practice prior to entry to the specialty area, they did not meet the sampling criteria. Although I assume the process is similar for new nurses in specialty areas, I cannot assert that stance with any degree of confidence. I do not have the data to support such a stance.

Dissemination Strategies

The results of this study have significance for new registered nurses entering practice, for their nursing unit managers and clinical educators, as well as for nurse educators in university settings. Findings also contribute to the substantive knowledge of the discipline, particularly in the areas of clinical judgement and knowledge utilization, and thus, will be reported in scholarly nursing and research journals, and presented at scholarly and academic conferences.

Participants will be offered a short report detailing the results of the study, which will be mailed to them following completion of the study, as they request. In addition, I will submit manuscript reports to nursing practice journals with high impact among nurse managers and clinical nurse educators. I will submit short articles to the newsletters of the two provincial nursing associations participating in the study. I will also offer presentations to clinical nurse educators and nursing managers to explain the process of new nurse development of clinical judgement and discuss the implications of this research for the practice setting. Lastly, through presentations, I will inform university nurse educators of the process that nurses experience in developing their clinical judgement in their first two years of practice and explain teaching/learning strategies from the basic education program that graduates have identified as useful in practice for developing their clinical judgement. I will also submit manuscripts with this focus to nursing education journals. Lastly and probably most importantly, students in the final courses of their nursing programs could be prepared to enter practice with information about this process and identification of useful resources and strategies in the practice setting to assist them in developing their own clinical judgement in practice.

Conclusion

The Theory of Developing Clinical Judgement in practice is based in the data and fits the experience of new nurses as they learn to practice nursing in their specific employment settings. The general themes indicate the most important aspects of this process and are evident in the theory and its stages. The key theme is new nurses' needs and desires to learn in nursing practice. This over-riding theme relates to the second theme, the importance of the social network for learning in nursing practice, and the third theme, new nurses' needs to be employed in learning organizations that invest in human and social capital. The theory reflects the various types of knowledge that new nurses use in evaluating practice options and making a decision, and how they learn this process. Understanding the process of developing clinical judgement has implications for employers of new nurses, their nursing managers and clinical educators, their more experienced nursing colleagues, and new nurses themselves. Educational programs that prepare new nurses also need to examine curricula in light of this process to determine more effective ways of preparing graduates to enter nursing practice. The process of developing clinical judgement is stressful and in early stages, may place new nurses' clients at some risk. Knowledge of the process will prepare new nurses, their faculty, clinical nurse educator, nursing managers, and employing agencies to better support new nurses as they learn the practice of nursing to the competent level. More importantly, human resource policies that focus on retention of new nurses in practice can be initiated based on this evidence.

References

Adams, B. L. (1999). Nursing education for critical thinking: An integrative review. *Journal of Nursing Education, 38*(3), 111-119.

Alberta Association of Registered Nurses. (1999). *Nursing Practice Standards.* Edmonton, AB: Author.

Alberta Association of Registered Nurses. (2000). *Entry-to-Practice Competencies.* Edmonton, AB: Author.

Arbon, P. (2004). Understanding experience in nursing. *Journal of Clinical Nursing, 13,* 150-157.

Audi, R. (1999). *The Cambridge dictionary of philosophy* (2nd ed.). Cambridge, UK: Cambridge University Press.

Basler, M. E. (1993). Predictors of clinical performance of new graduate nurses participating in preceptor orientation programs. *Journal of Continuing Education in Nursing, 24*(4), 158-165.

Beecroft, P. C. (2001). Clinical judgment in evidence-based practice (editorial). *Clinical Nurse Specialist, 15*(5), 191-192 .

Beecroft, P. C., Kunzman, L., & Krozek, C. (2001). RN internship: Outcomes of a one-year pilot program. *JONA, 31*(12), 575-582.

Beeman, K. L., Jernigan, A. C., & Hensley, P. D. (1999). Employing new grads: A plan for success. *Nursing Economics, 17*(2), 91-95.

Benner, P. (1982). Issues in competency-based testing. *Nursing Outlook, 4*, 303-309.

Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park CA: Addison-Wesley.

Benner, P., Hooper-Kyriakidis, P., & Stannard, D. (1999). Clinical wisdom and interventions in critical care: A thinking-in-action approach. In P. Benner, P. Hooper-Kyriakidis, & D. Stannard (Eds.), *Clinical wisdom and interventions in critical care: A thinking-in-action approach*. Philadelphia: Saunders.

Benner, P., Tanner, C. A., & Chesla, C. A. (1996a). Clinical judgment. In P. Benner, C. A. Tanner, & C. A. Chesla (Eds.), *Expertise in Nursing Practice: Caring, Clinical Judgment, and Ethics* (pp. 1-28). New York: Springer.

Benner, P., Tanner, C. A., & Chesla, C. A (Eds.). (1996b). *Expertise in nursing practice: Caring, clinical judgment, and ethics*. New York: Springer.

Benzies, K. M., & Allen, M. N. (2001). Symbolic interactionism as a theoretical perspective for multiple method research. *Journal of Advanced Nursing, 33*(4), 541-547.

Bevis, E. O., & Watson, J. (1989). *Toward a caring curriculum: A new pedagogy for nursing*. New York: National League for Nursing.

Bjork, I. T. (1999). Practical skill development in new nurses. *Nursing Inquiry, 6*, 34-47.

Bowles, K. (2000). The relationship between critical-thinking skills and the clinical-judgment skills of baccalaureate nursing students. *Journal of Nursing Education,* *39*(8), 373-376.

Boychuk Duchscher, J. E. (2001). Out in the real world: Newly graduated nurses in acute-care speak out. *JONA, 31*(9), 426-439.

Bradshaw, A. (1997). Defining 'competency' in nursing (Part 1): A policy review. *Journal of Clinical Nursing, 6*(5), 347-354.

Brannon, L. A., & Carson, K. L. (2003). The representativeness heuristic: Influence on nurses' decision making. *Applied Nursing Research, 16*(3), 201-204.

Brookfield, S. D. (1991). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco: Jossey-Bass.

Brooks, E. M., & Thomas, S. (1997). The perception and judgment of senior baccalaureate student nurses in clinical decision making. *Advances in Nursing Science, 19*(3), 50-69.

Broome, M. E. (2003). Mentoring: To everything a season. *Nursing Outlook, 51*(6), 249-250.

Bryar, R. M., Closs, S. J., Baum, G., Cooke, J., Griffith, J., Hostick, T. et al. (2003). The Yorkshire BARRIERS project: Diagnostic analysis of barriers to research utilization. *International Journal of Nursing Studies, 40*, 73-84.

Brykczynski, K. A. (1999). An interpretive study describing the clinical judgement of nurse practitioners. *Scholarly Inquiry for Nursing Practice: An International Journal, 13*(2), 141-185.

Buckingham, C. D., & Adams, A. (2000). Classifying clinical decision making: A unifying approach. *Journal of Advanced Nursing, 32*(4), 981-989.

Butcher, R. B. (1998). Foundations for evidence-based decision making. National Forum on Health (Canadian) (pp. 259-290). Saint-Foy, QC: Editions Multimondes.

Canadian Association of Schools of Nursing. (2004). CASN position statement on baccalaureate education and baccalaureate programs. Retrieved from: http://www.casn.ca/Education/Position_Statements/Position_Statement_main.htm

Canadian Institute for Health Information [CIHI]. (2002). Workforce trends of Registered Nurses in Canada, 2002. Retrieved from: http://cihi.ca

Canadian Nurses Association. (2002). *Code of Ethics for Registered Nurses*. Ottawa, ON: Author.

Carper, B. A. (1978). Fundamental patterns of knowing in nursing. *Advances in Nursing Science, 1*(1), 13-23.

Case, B. (1998). Competence development: Critical thinking, clinical judgment, and technical ability. In K. J. Kelly-Thomas (Ed.), *Clinical and nursing staff development: Current competence, future focus* (2nd ed., pp. 240-281). Philadelphia: Lippincott-Raven.

Casey, K., Fink, R., Krugman, M., & Propst, J. (2004). The graduate nurse experience. *JONA, 34*(6), 303-311.

Chambers, M. A. (1998). Some issues in the assessment of clinical practice: A review of the literature. *Journal of Clinical Nursing, 7*(3), 201-208.

Chapple, M., & Aston, E. S. (2004). Practice learning teams: A partnership approach to supporting students' clinical learning. *Nurse Education in Practice, 4*, 143-149.

Charmaz, K. (2000). Grounded Theory: Objectivist and constructivist methods. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 507-535). Thousand Oaks, CA: Sage.

Charmaz, K. (2003). Qualitative interviewing and grounded theory analysis. In J.A. Holstein & J.F.Gubrium (Eds.), *Inside interviewing: New lenses, new concerns* (pp. 311-330). Thousand Oaks, CA: Sage.

Chase, S. K. (1995). The social context of critical care clinical judgment. *Heart & Lung, 24*(2), 154-162.

Cioffi, J. (1997). Heuristics, servants to intuition, in clinical decision making. *Journal of Advanced Nursing, 26*(1), 203-208.

Cioffi, J. (2001). A study of the use of past experience in clinical decision making in emergency situations. *International Journal of Nursing Studies, 38*, 591-599.

Cioffi, J. (2002). What are clinical judgements? In C. Thompson, & D. Dowding (Eds.), *Clinical decision making and judgement in nursing* (pp. 47-65). Edinburgh, UK: Churchill Livingstone.

Clark Callister, L., Matsumara, G., Lookinland, S., Mangum, S., & Loucks, C. (2005). Inquiry in baccalaureate nursing education: Fostering evidence-based practice.

Journal of Nursing Education, 44(2), 59-64.

Clark, M. C., Owen, S. V., & Tholcken, M. A. (2004). Measuring student perceptions of clinical competence. *Journal of Nursing Education, 43*(12), 548-554.

Clarke, C. L., & Wilcockson, J. (2002). Seeing need and developing care: Exploring knowledge for and from practice. *International Journal of Nursing Studies, 39*, 397-406.

Cowin, L. S., & Hengstberger-Sims, C. (2006). New graduate nurse self-concept and retention: A longitudinal study. *International Journal of Nursing Studies, 43*, 59-70.

Cresswell, J.W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Daly, W. M. (1998). Critical thinking as an outcome of nursing education. What is it? Why is it important to nursing practice? *Journal of Advanced Nursing, 28*(2), 323-331.

del Bueno, D. J. (1990). Experience, education, and nurses' ability to make clinical judgments. *Nursing and Health Care, 11*(6), 290-294.

Delaney, C. (2003). Walking a fine line: Graduate nurses' transition experiences during orientation. *Journal of Nursing Education, 42*(10), 437-443.

Dewey, J. (1933). *How we think*. Boston: Heath.

Dewey, J. (1938). *Experience and education*. New York: Kappa Delta Pi.

DiCenso, A., & Cullum, N. (1998). Implementing evidence-based nursing: Some misconceptions. *Evidence-Based Nursing, 1*(1), 38-40.

Dowding, D., & Thompson, C. (2003). Measuring the quality of judgement and decision making in nursing. *Journal of Advanced Nursing, 44*(1), 49-57.

Downie, R. S., MacNaughton, J., & Randall, J. (2000). *Clinical judgement: Evidence in practice*. Oxford, UK: Oxford University Press.

Drummond, J.E., Wiebe, C.F., & Elliott, M.R. (1994). Maternal understanding of infant crying: What does a negative case tell us? *Qualitative Health Research, 4*(2), 208-223.

Ellerton, M., & Gregor, F. (2003). A study of transition: The new nurse graduate at 3 months. *The Journal of Continuing Education in Nursing, 34*(3), 103-107.

Elstein, A. S., & Schwartz, A. (2000). Clinical reasoning in medicine. In J. Higgs, & M. Jones (Eds.), *Clinical reasoning in the health professions* (2nd ed., pp. 95-106). Boston: Butterworth Heinemann.

Epstein, R. M., & Hundert, E. M. (2002). Defining and assessing professional competence. *JAMA, 287*(2), 226-235.

Eraut, M. (1994). *Developing professional knowledge and competence*. London: The Falmer Press.

Eraut, M. (1998). Concepts of competence. *Journal of Interprofessional Care, 12*(2), 127-139.

Estabrooks, C. A. (1998). Will evidence-based nursing practice make practice perfect? *Canadian Journal of Nursing Research, 30* (1), 15-36.

Estabrooks, C. A. (1999a). The conceptual structure of research utilization. *Research in Nursing & Health, 22*, 203-216.

Estabrooks, C. A. (1999b). Mapping the research utilization field in nursing. *Canadian Journal of Nursing Research, 31*(1), 53-72.

Estabrooks, C. A. (1999c). Modeling the individual determinants of research utilization. *Western Journal of Nursing Research, 21*(6), 758-772.

Estabrooks, C. A. (2001). Research utilization and qualitative research. In J. M. Morse, J. Swanson, & A. Kuzel (Eds.), *The nature of qualitative evidence* (pp. 275-298). Thousand Oaks, CA: Sage.

Estabrooks, C. A., Floyd, J. A., Scott-Findlay, S., O'Leary, K. A., & Gushta, M. (2003). Individual determinants of research utilization: A systematic review. *Journal of Advanced Nursing, 43*(5), 506-520.

Estabrooks, C. A., O'Leary, K. A., Ricker, K., & Humphrey, C. K. (2003). The Internet and access to evidence: How are nurses positioned? *Journal of Advanced Nursing, 42*(1), 73-81.

Evidence-Based Medicine Working Group. (1992). Evidence-based medicine. A new approach to teaching the practice of medicine. *JAMA, 268*(17), 2420-2425.

Facione, N. C., & Facione, P. A. (1996). Externalizing the critical thinking in knowledge development and clinical judgment. *Nursing Outlook, 44*, 129-136.

Facione, N. C., Facione, P. A., & Sanchez, C. A. (1994). Critical thinking disposition as a measure of competent clinical judgment: The development of the California Critical Thinking Dispositions Inventory. *Journal of Nursing Education, 33*(8), 345-350.

Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction (ERIC ED 315 423).* Millbrae, CA: The California Academic Press.

Fawcett, J., Watson, J., Neuman, B., Hinton Walker, P., & Fitzpatrick, J. J. (2001). On nursing theories and evidence. *Journal of Nursing Scholarship, 33*(2), 115-119.

Fearon, M. (1998). Assessment and measurement of competence in practice. *Nursing Standard, 12*(22), 43-47.

Ferguson, L. M. (1996). Preceptors enhance student self-confidence. *Nursing Connections, 9*(1), 49-61.

Ferguson, L. M., & Day, R. A. (2004). Supporting new nurses in Evidence-Based Practice. *JONA, 34*(11), 490-492.

Ferguson, L. M., & Hawke, M. (2002). *Final Report: A Pilot Project Program to Support RN/RPN Preceptors.* Saskatoon, SK: Saskatoon District Health.

Finn, C. P. (2001). Autonomy: An important component for nurses' job satisfaction. *International Journal of Nursing Studies, 38*, 349-357.

Flaming, D. (2001). Using phronesis instead of 'research-based practice' as the guiding light for nursing practice. *Nursing Philosophy, 2*, 251-258.

Fontana, A., & Frey, J. H. (1994). Interviewing: The art of science. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 361-376). Thousand Oaks, CA: Sage.

Fonteyn, M. E., & Ritter, B. J. (2000). Clinical reasoning in nursing. In J. Higgs, & M. Jones (Eds.), *Clinical reasoning in the health professions* (2nd ed., pp. 107-116). Boston: Butterworth Heinemann.

Forbes, H., Duke, M., & Prosser, M. (2001). Students' perceptions of learning outcomes from group-based, problem-based teaching and learning activities. *Advances in Health Sciences Education, 6*, 205-217.

French, B. (2005). The process of research use in nursing. *Journal of Advanced Nursing, 49*(2), 125-134.

Garb, H. N. (1996). The representativeness and past-behavior heuristics in clinical judgment. *Professional Psychology: Research and Practice, 27*(3), 272-277.

Garland, G. A. (1996). Self report of competence: A tool for the staff development specialist. *Journal for Nurses in Staff Development, 12*(4), 191-197.

Garrett, B. (2005). Student nurses' perceptions of clinical decision making in the final year of adult nursing studies. *Nurse Education in Practice, 5*, 30-39.

Giancarlo, C.A., & Facione, P.A. (2001). A look across four years at the disposition toward clinical judgement among undergraduate students. *The Journal of General Education, 50*(1), 29-55.

Gillis, A., & Jackson, W. (2002). *Research for nurses: Methods and interpretation.* Philadelphia: F.A.Davis.

Gillis, A., Jackson, W., & Beiswanger, D. (2004). University nursing graduates: Perspectives on factors of retention and mobility. *Nursing Leadership, 17*(1), 97-110.

Girot, E. A. (1993). Assessment of competence in clinical practice. *Nurse Educator Today, 13*, 83-90.

Glaser, B. G. (1978). *Theoretical Sensitivity*. Mill Valley, CA: The Sociology Press.

Glaser, B.G. (1992). *Basics of grounded theory analysis: Emergence vs forcing*. Mill Valley, CA: Sociological Press.

Glaser, B. G. (2002). Conceptualization: On theory and theorizing using Grounded Theory. *International Journal of Qualitative Methods, 1(2), Article 3, Retrieved on May 8, 2002, From Http://Www.Ualberta.Ca/~Ijqm/*

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of Grounded Theory: Strategies for qualitative research*. New York: Aldine de Gruyter.

Gonczi, A. (1994). Competency based assessment in the professions in Australia. *Assessment in Education: Principles, Policy & Practice, 1*(1), 27-41.

Goorapah, D. (1997). Clinical competence/clinical credibility. *Nurse Education Today,* *17*, 297-302.

Gopee, N. (2002). Human and social capital as facilitators of lifelong learning in nursing. *Nurse Education Today, 22*, 608-616.

Gordon, M., Murphy, C. P., Candee, D., & Hiltunen, E. (1994). Clinical judgment: An integrated model. *Advances in Nursing Science, 16*(4), 55-70.

Greenwood, J., Sullivan, J., Spence, K., & McDonald, M. (2000). Nursing scripts and the organizational influences on critical thinking: Report of a study of neonatal nurses' clinical reasoning. *Journal of Advanced Nursing, 31*(5), 1106-1114.

Halpern, D.F. (2001). Assessing the effectiveness of critical thinking instruction. *The Journal of General Education, 50*(4), 270-286.

Hamers, J. P. H., Huijer Abe-Saad, H., & Halferns, R. J. G. (1994). Diagnostic process and decision making in nursing: A literature review. *Journal of Professional Nursing, 10*(3), 154-163.

Harbison, J. (2001). Clinical decision making in nursing: Theoretical perspectives and their relevance to practice. *Journal of Advanced Nursing, 35*(1), 126-133.

Hastie, R. (2001). Problems for judgment and decision making. *Annual Review of Psychology, 52*, 653-683.

Henderson, S. (2002). Factors impacting on nurses' transference of theoretical knowledge of holistic care into clinical practice. *Nurse Education in Practice, 2*, 244-250.

Higgs, J., & Jones, M. (2000a). Clinical reasoning: An introduction. In J. Higgs, & M.

Jones (Eds.), *Clinical reasoning in the health professions* (2nd ed., pp. xiii-xiv). Boston: Butterworth Heinemann.

Higgs, J., & Jones, M. (2000b). *Clinical reasoning in the health professions* (2nd ed.). Boston: Butterworth Heinemann.

Higgs, J., & Titchen, A. (2000). Knowledge and reasoning. In J. Higgs, & M. Jones (Eds.), *Clinical reasoning in the health professions* (2nd ed., pp. 23-32). Boston: Butterworth Heinemann.

Hoffman, T. (1999). The meanings of competency . *Journal of European Industrial Training, 23*(9), 275-286.

Howell Adams, M., Whitlow, J. F., Stover, L. M., & Williams Johnson, K. (1996). Critical thinking as an educational outcome: An evaluation of current tools of measurement. *Nurse Educator, 21*(3), 23-32.

Howkins, E. J., & Ewens, A. (1999). How students experience professional socialization. *International Journal of Nursing Studies, 35*, 41-49.

Huberman, A. M., & Miles, M. B. (1994). Data management and analysis methods. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 428-444). Thousand Oaks, CA: Sage.

Hutchinson, S. A., & Wilson, H. S. (2001). Grounded theory: The method. In P. L. Munhall (Ed.), *Nursing research: A qualitative perspective* (pp. 209-243). Boston: Jones & Bartlett.

Ironside, P., Diekelmann, N., & Hirschmann, M. (2005). Learning the practices of knowing and connecting: The voices of students. *Journal of Nursing Education, 44*(4), 153-155.

Jasper, M. (1996). The first year as a staff nurse: The experiences of a first cohort of Project 2000 nurses in a demonstration district. *Journal of Advanced Nursing, 24*, 779-790.

Jenks, J. M. (1993). The pattern of personal knowing in nurse clinical decision making. *Journal of Nursing Education, 32*(9), 399-405.

Jennings, B. M., & Loan, L. A. (2001). Misconceptions among nurses about Evidence-Based Practice. *Journal of Nursing Scholarship, 33*(2), 121-127.

Johnson, J. L., & Ratner, P. A. (1997). The nature of knowledge used in clinical practice. In S. E. Thorne, & V. E. Hayes (Eds.), *Nursing praxis: Knowledge and action* (pp. 3-22). Thousand Oaks, CA: Sage.

Jones, S. A., & Brown, L. N. (1991). Critical thinking: Impact on nursing education. *Journal of Advanced Nursing, 16*, 529-533.

Jones, S. A., & Brown, L. N. (1993). Alternative views on defining critical thinking through the nursing process. *Holistic Nursing Practice, 7*(3), 71-76.

Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgement. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 49-81).

Cambridge, UK: Cambridge University Press.

Kataoka-Yahiro, M., & Saylor, C. (1994). A critical thinking model for nursing judgment. *Journal of Nursing Education, 33*(8), 351-356.

Kelly, B. (1996). Hospital nursing: "It's a battle!" A follow-up study of English graduate nurses. *Journal of Advanced Nursing, 24*, 1063-1069.

Khoza, L. B., & Ehlers, V. J. (1998). The competencies of newly qualified nurses as viewed by senior professional nurses. *Curationis, 21*(9), 67-76.

Kikuchi, J. F., & Simmons, H. (1999). Practical nursing judgement: A moderate realist conception. *Scholarly Inquiry for Nursing Practice: An International Journal, 13*(1), 43-55.

King, L., & Appleton, J. V. (1997). Intuition: A critical review of the literature. *Journal of Advanced Nursing, 26*(1), 194-202.

Kintgen-Andrews, J. (1991). Critical thinking and nursing education: Perplexities and insights. *Journal of Nursing Education, 30*(4), 152-157.

Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence-based practice: A conceptual framework. *Quality in Health Care, 7*, 149-158.

Kitson, A. (1997). Using evidence to demonstrate the value of nursing. *Nursing Standard, 11*(28), 34-39.

Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence based practice: A conceptual framework. *Quality in Health Care, 7*, 149-158.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Kowalske, K. J., & Sliwa, J. A. (2000). Assessing resident clinical competence. *American Journal of Physical Medicine and Rehabilitation, 79*(5), 468-473.

Kuhn, D. (1999). A developmental model of critical thinking. *Educational Researcher, 28*(2), 16-25.

Lamond, D., & Thompson, C. (2000). Intuition and analysis in decision making and choice. *Journal of Nursing Scholarship, 32* (3), 411-414.

Lauri, S., Salantera, S., Chalmers, K., Ekman, S.-L., Kim, H. S., Kappeli, S. et al. (2001). An exploratory study of clinical decision making in five countries. *Journal of Nursing Scholarship, 33*(1), 83-90.

Leppa, C. J. (1997). Standardized measures of critical thinking: Experience with the California Critical Thinking tests. *Nurse Educator, 22*(5), 29-33.

Liaschenko, J., & Fisher, A. (1999). Theorizing the knowledge that nurses use in the conduct of their work. *Scholarly Inquiry for Nursing Practice: An International Journal, 13*(1), 29-41.

Lincoln, Y. S., & Guba, E. G. (1985). Establishing trustworthiness. In Y. S. Lincoln, & E. G. Guba (Eds.), *Naturalistic Inquiry*. Beverly Hills, CA: Sage.

MacDonald, C. (2002). Nurse autonomy as relational. *Nursing Ethics, 9*(2), 194-201.

MacDonald, M. (2001). Finding a critical perspective in Grounded Theory. In R. S. Schreiber, & P. N. Stern (Eds.), *Using Grounded Theory in Nursing* (pp. 113-158). New York: Springer.

MacIntosh, J. (2003). Reworking professional nursing identity. *Western Journal of Nursing Research, 25*(6), 725-741.

MacLeod, M. L. P. (1996). *Practising nursing - Becoming experienced.* Edinburgh, UK: Churchill Livingstone.

Madjar, I., & Walton, J. A. (2001). What is problematic about evidence? In J. M. Morse, J. M. Swanson, & A. J. Kuzel (Eds.), *The nature of qualitative evidence* (pp. 28-45). Thousand Oaks, CA: Sage.

Malterud, K. (2001). Qualitative research: Standards, challenges, and guidelines. *Lancet, 358*, 483-488.

Marcum, E. H., & West, R. D. (2004). Structured orientation for new graduates: A retention strategy. *Journal for Nurses in Staff Development, 20*(3), 118-124.

Martin, J. (2002). *Organizational culture.* Thousand Oaks, CA: Sage.

May, B. A., Edell, V., Burell, S., Doughty, J., & Langford, C. (1999). Critical thinking and clinical competence: A study of their relationship in BSN seniors. *Journal of Nursing Education, 38*(3), 100-110.

Maynard, C. A. (1996). Relationship of critical thinking ability to professional nursing competence. *Journal of Nursing Education, 35*(1), 12-18.

McCaughan, D., Thompson, C., Cullum, N., Sheldon, T. A., & Thompson, D. R. (2002). Acute care nurses' perceptions of barriers to using research information in clinical decision making. *Journal of Advanced Nursing, 39*(1), 46-60.

McCutcheon, H. H. I., & Pincombe, J. (2001). Intuition: An important tool in the practice of nursing. *Journal of Advanced Nursing, 35*(5), 342-348.

McKenna, B. G., Smith, N. A., Poole, S. J., & Coverdale, J. H. (2003). Horizontal violence: Experiences of Registered Nurses in their first year of practice. *Journal of Advanced Nursing, 42*(1), 90-96.

Meadows, L. M., & Morse, J. M. (2001). Constructing evidence within the qualitative project. In J. M. Morse, J. M. Swanson, & A. J. Kuzel (Eds.), *The nature of qualitative evidence* (pp. 187-200). Thousand Oaks, CA: Sage.

Meretoja, R., Eriksson, E., & Leino-Kilpi, H. (2001). Indicators for competent nursing practice. *Journal of Nursing Management, 10*, 95-102.

Meretoja, R., Isoaho, H., & Leino-Kilpi, H. (2004). Nurse Competence Scale: Development and psychometric testing. *Journal of Advanced Nursing, 47*(2), 124-133.

Meretoja, R., & Leino-Kilpi, H. (2001). Instruments for evaluating nurse competence. *JONA, 31*(7/8), 346-352.

Milliken, P. J., & Schreiber, R. S. (2001). Can you "do" Grounded Theory without

Symbolic Interactionism? In R. S. Schreiber, & P. N. Stern (Eds.), *Using Grounded Theory in nursing* (pp. 177-190). New York: Springer.

Morse, J. M. (1997). Considering theory derived from qualitative research. In J. M. Morse (Ed.), *Completing a qualitative project: Details and dialogue* (pp. 163-189). Thousand Oaks, CA: Sage.

Morse, J. M. (2001a). Situating Grounded Theory within qualitative inquiry. In R. S. Schreiber, & P. N. Stern (Eds.), *Using Grounded Theory in Nursing* (pp. 1-15). New York: Springer.

Morse, J. M. (2001b). Types of talk: Modes of responses and data-led analytic strategies. P. L. Munhall *Nursing research: A qualitative perspective* (3rd ed.). Boston: Jones & Bartlett.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods, 1(2), Article 2, Retrieved on May 8, 2002, From Http://Www.Ualberta.Ca/~Ijqm/*

Morse, J. M., & Richards, L. (2002). *Readme first for a user's quide to qualitative methods*. Thousand Oaks CA: Sage.

Munhall, A. (1998). Nursing, research, and the evidence. *Evidence-Based Nursing, 1*(1), 4-6.

National League for Nursing. (1992). *Criteria and Guidelines for the Evaluation of*

Baccalaureate and Higher Degree Programs in Nursing. New York: Author.

National Nursing Competency Project. (1997). *National Nursing Competency Project Final Report.* Ottawa: Canadian Nurses Association.

Nelson, D., Purdy, J., & Godfrey, L. (2004). Using a mentorship program to recruit and retain student nurses. *JONA, 34*(12), 551-553.

Nicol, M. J., Fox-Hiley, A., Bavin, C. J., & Sheng, R. (1996). Assessment of clinical and communication skills: Operationalizing Benner's model. *Nurse Education Today, 16*, 175-179.

Nieswiadomy, R.M. (1998). *Foundations of nursing research* (3rd ed.). Philadelphia: Appleton & Lange.

Nokes, K. M., Nickitas, D. M., Keida, R., & Neville, S. (2005). Does service-learning increase cultural competency, critical thinking, and civic engagement? *Journal of Nursing Education, 44*(2), 65-70.

Norman, I. J., Watson, R., Murrells, T., Calman, L., & Redfern, S. (2002). The validity and reliability of methods to assess the competence to practise of pre-registration nursing and midwifery students. *International Journal of Nursing Studies, 39*, 133-145.

Nursing Education Program of Saskatchewan. (2003). *Survey of Nursing Education Program of Saskatchewan Graduates.* Saskatoon, SK: Insightrix Research Services.

Oermann, M. H. (1997). New graduates' perceptions of clinical practice. *Journal of Continuing Education in Nursing, 28*(1), 20-25.

Oermann, M. H. (1999). Critical thinking, clinical practice. *Nursing Management, 30*(4), 40C-40I.

Office of Nursing Policy [ONP]. (2005). Fact Sheet: Nursing Issues: General Statistics. Health Canada. Retrieved from: www.hc-sc.gc.ca

Olson, R., Nelson, M., Stuart, C., Young, L., Kleinsasser, A., Schroedermeier, R. et al. (2001). Nursing student residency program: A model for a seamless transition from nursing student to RN. *Journal of Nursing Administration, 31*(1), 40-48.

Palmer, A., Burns, S., & Bulman, C. (1994). *Reflective practice in nursing: The growth of the professional practitioner*. Oxford, UK: Blackwell Scientific Publications.

Panniers, T. L., & Kellogg-Walker, E. (1994). A decision analytical approach to clinical nursing. *Nursing Research, 43*(4), 245-249.

Patel, V., Arocha, J. F., & Kaufman, D. R. (1999). Expertise and tacit knowledge in medicine. In R. J. Sternberg, & J. A. Horvath (Eds.), *Tacit knowledge and professional practice* (pp. 75-99). Mahwah, NJ: Lawrence Erlbaum.

Paul, R. W. (1990). *Critical thinking: What every person needs to survive in a rapidly changing world.* Rohnert Park, CA: Center for Critical Thinking and Moral Critique.

Perry, W. (1970). *Forms of intellectual and ethical development in the college years.*

New York: Holt, Rinehart, & Winston.

Peshkin, A. (1988). In search of subjectivity - One's own. *Educational Researcher, 17*(7), 17-21.

Radwin, L. E. (1996). Knowing the patient: A review of research on an emerging concept. *Journal of Advanced Nursing, 23*(6), 1142-1146.

Ramritu, P. L., & Barnard, A. (2001). New nurse graduates' understanding of competence. *International Nursing Review, 48*, 47-58.

Randle, J. (2003). Bullying in the nursing profession. *Journal of Advanced Nursing, 43*(4), 395-401.

Rane-Szostak, D., & Robertson, J. F. (1996). Issues in measuring critical thinking: Meeting the challenge. *Journal of Nursing Education, 35*(1), 5-11.

Rapps, J., Riegel, B., & Glaser, D. (2001). Testing a predictive model of what makes a critical thinker. *Western Journal of Nursing Research, 23*(6), 610-626.

Ray, L. D., & Mayan, M. (2001). Who decides what counts as evidence? In J. M. Morse, J. M. Swanson, & A. J. Kuzel (Eds.), *The nature of qualitative evidence* (pp. 50-73). Thousand Oaks, CA: Sage.

Redfern, S., Norman, I., Calman, L., Watson, R., & Murrells, T. (2002). Assessing competence to practise in nursing: A review of the literature. *Research Papers in Education, 17*(1), 51-77.

Richardson, V., & Fenstermacher, G. D. (2001). Manner in teaching: The study in four parts. *Journal of Curriculum Studies, 33* (6), 631-637.

Rideout, E., England-Oxford, V., Brown, B., Fothergill-Bourbonnais, F., Ingram, C., Benson, G. et al. (2002). A comparison of Problem-Based and convential curricula in nursing education. *Advances in Health Sciences Education, 7*(3-17).

Ryan, G.W., & Bernard, H.R. (2000). Data management and analysis methods. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of Qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Rycroft-Malone, J., Harvey, G., Seers, K., Kitson, A., & McCormack, B. T. A. (2004). An exploration of the factors that influence the implementation of evidence into practice. *Journal of Clinical Nursing, 13*, 913-924.

Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence-based medicine: What it is and what it isn't. *British Medical Journal, 312*, 71-72.

Sackett, D.L., Straus, S.E., Scott Richardson, W., Rosenberg, W., & Haynes, R.B. (2000). *Evidence-Based Medicine: How to practice and teach EBM.* Edinburgh: Churchill Livingstone.

Santucci, J. (2004). Facilitating the transition into nursing practice: Concepts and strategies for mentoring new graduates. *Journal of Nurses in Staff Development, 20*(6), 274-284.

Saskatchewan Registered Nurses Association. (1999). *Standards and Foundation Competencies for the Practice of Registered Nurses.* Regina, SK: Author.

Scheffer, B. K., & Rubenfeld, G. M. (2000). A consensus statement on critical thinking in nursing. *Journal of Nursing Education, 39*(8), 352-359.

Schein, E. H. (1974). *Professional education*. New York: McGraw-Hill.

Schein, E. H. (1992). *Organizational culture and leadership* (2nd ed.). San Francisco: Jossey-Bass.

Schein, E. H. (1993). On dialogue, culture, and organizational learning. *Organizational Dynamics, 22*(2), 40-51.

Schön, D. (2001). The crisis of professional knowledge and the pursuit of an epistemology of practice. In J. Raven, & J. Stephenson (Eds.), *Competence in the learning society* (pp. 183-207). New York: Peter Lang.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Schreiber, R. S., & Stern, P. N. (2001). *Using Grounded Theory in nursing*. New York: Springer.

Schwarz, N., & Vaughn, L. A. (2002). The availability heuristic revisited: Ease of recall and content recall as distinct sources of information. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 103-119). Cambridge, UK: Cambridge University Press.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Currency Doubleday.

Shuy, R.W. (2003). In-person versus telephone interviewing. In J.A. Holstein & J.F.Gubrium (Eds.), *Inside interviewing: New lenses, new concerns* (pp. 175-193). Thousand Oaks, CA: Sage.

Silverman, D. (1993). Transcripts. In D. Silverman (Ed.), *Interpreting qualitative data: Methods for analysing talk, text and interaction* (pp. 115-143). Thousand Oaks, CA: Sage.

Stern, P. N. (1980). Grounded Theory methodology: Its uses and processes. *Image: Journal of Nursing Scholarship, 12*(1), 20-23.

Stetler, C. B. (1985). Research utilization: Defining the concept. *Image: Journal of Nursing Scholarship, 17*(2), 40-44.

Stetler, C. B. (1994). Refinement of the Stetler/Marram model for application of research findings to practice. *Nursing Outlook, 42*(1), 15-25.

Stetler, C. B. (2001). Updating the Stetler Model of research utilization to facilitate Evidence-Based Practice. *Nursing Outlook, 49*(6), 272-279.

Stinson, S., & Wilinson, C. (2004). Creating a successful clinical extern program using a program planning logic model. *Journal for Nurses in Staff Development, 20*(3), 140-144.

Strauss, A., & Corbin, J. (1994). Grounded theory methodology. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 273-285). Thousand Oaks, CA: Sage.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing Grounded Theory* (2nd ed.). Thousand Oaks, CA: Sage.

Tanner, C. A. (1993). Rethinking clinical judgment. In N. Diekelmann, & M. Rather (Eds.), *Transforming RN education* (pp. 15-41). New York: National League for Nursing.

Tanner, C. A. (1999). Evidence-based practice: Research and critical thinking. *Journal of Nursing Education, 38*(3), 99.

Tanner, C. A. (2000). Critical thinking: Beyond nursing process. *Journal of Nursing Education, 39*(8), 338-339.

Tanner, C. A., Benner, P., Chesla, C., & Gordon, D. R. (1993). The phenomenology of knowing the patient. *Image: Journal of Nursing Scholarship, 25*(4), 273-280.

Thompson, C. (1999). A conceptual treadmill: The need for 'middle ground' in clinical decision making theory in nursing. *Journal of Advanced Nursing, 30*(5), 1222-1229.

Thompson, C. (2003). Clinical experience as evidence in evidence-based practice. *Journal of Advanced Nursing, 43*(3), 230-237.

Thompson, C., & Dowding, D. (2001). Responding to uncertainty in nursing practice. *International Journal of Nursing Studies, 38*, 609-615.

Thompson, C., & Dowding, D. (2003). *Clinical decision making and judgement in* *nursing*. Edinburgh, UK: Churchill Livingstone.

Thompson, C., McCaughan, D., Cullum, N., Sheldon, T., Mulhall, A., & Thompson, D. (2001a). Research information in nurses' clinical decision making: What is useful? *Journal of Advanced Nursing, 36*(3), 376-388.

Thompson, C., McCaughan, D., Cullum, N., Sheldon, T. A., Mulhall, A., & Thompson, D. R. (2001b). The accessibility of research-based knowledge for nurses in United Kingdon acute care settings. *Journal of Advanced Nursing, 36*(1), 11-21.

Thorne, S. (2001). The implications of disciplinary agenda on quality criteria for qualitative research. In J. M. Morse, J. M. Swanson, & A. J. Kuzel (Eds.), *The nature of qualitative research* (pp. 141-159). Thousand Oaks, CA: Sage.

Thorne, S., Joachim, G., Paterson, B., & Canam, C. (2002). Influence of the research frame on qualitatively derived Health Science knowledge. *International Journal of Qualitative Methods, 1(1), Article 1, Retrieved on March 8, 2002, From Http://Www.Ualberta.Ca/~Ijqm/*

Twibell, R., Ryan, M., & Hermiz, M. (2005). Faculty perceptions of critical thinking in student clinical experiences. *Journal of Nursing Education, 44*(2), 71-79.

Upshur, R. (2000). Seven characteristics of medical evidence. *Journal of Evaluation in Clinical Practice, 6*(2), 93-97.

Upshur, R. E. G. (2001). The status of qualitative research as evidence. In J. M. Morse, J. M. Swanson, & A. J. Kuzel (Eds), *The nature of qualitative evidence* (pp. 5-26).

Thousand Oaks, CA: Sage.

Upshur, R. E. G., Vandenderkhof, E. G., & Goel, V. (2001). Meaning and measurement: An inclusive model of evidence in health care. *Journal of Evaluation in Clinical Practice, 7*(2), 91-96.

Videbeck, S. L. (1997a). Critical thinking: Prevailing practice in baccalaureate schools of nursing. *Journal of Nursing Education, 36*(1), 5-10.

Videbeck, S. L. (1997b). Critical thinking: A model. *Journal of Nursing Education, 36*(1), 23-28.

Wade, G. H. (1999). Professional nurse autonomy: Concept analysis and application to nursing education. *Journal of Advanced Nursing, 30*(2), 310-318.

Wagenaar, A., Scherpbier, A. J. J. A., Boshuizen, H. P. A., & Van Der Vleuten, C. P. M. (203). The importance of active involvement in learning: A qualitative study on learning results and learning processes in different traineeships. *Advances in Health Sciences Education, 8*, 201-212.

Watson, G., & Glaser, E. M. (1964). *Critical thinking appraisal manual*. New York: Harcourt Brace Janovich.

Watson, R. (2002). Clinical competence: Starship Enterprise or straitjacket? *Nurse Education Today, 22*, 476-480.

Watson, R., Calman, L., Norman, I., Redfern, S., & Murrells, T. (2002). Assessing clinical competence in student nurses. *Journal of Clinical Nursing, 11*, 554-555.

Watson, R., Stimpson, A., Topping, A., & Porock, D. (2002). Clinical competence assessment in nursing: A systematic review of the literature. *Journal of Advanced Nursing, 39*(5), 421-431.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity.* Cambridge, UK: Cambridge University Press.

While, A. E. (1994). Competence versus performance: which is more important? *Journal of Advanced Nursing, 20*, 525-531.

White, J. (1995). Patterns of knowing: Review, critique, and update. *Advances in Nursing Science, 17*(4), 73-86.

Williams, B. (2001). Developing critical reflection for professional practice through problem-based learning. *Journal of Advanced Nursing, 34*(1), 27-34.

Wilson, H. S., & Hutchinson, S. A. (1996). Methodologic mistakes in Grounded Theory. *Nursing Research, 45*(2), 122-124.

Appendix A: Ethical Approval

Appendix B: Letter of Invitation
You are invited…

…to be part of a study that will explore the experiences of new nurses in the first two years of practice. Specifically, the study will explore how you have developed your clinical judgement in nursing practice.

- The study is entitled: A grounded theory study of the new nurse's journey to competence in clinical judgement.
- The study will involve two to three interviews with you.
- The first interview will be between 1 and 2 hours, with subsequent interviews approximately 1 hour in length.
- These interviews will be audiotaped and transcribed.
- The interviews will be a place of your choosing.
- Linda Ferguson, RN, PhD(c) will conduct the interviews.
- You will be part of a study that helps us understand the first two years experience of new nurses.
- The study has received ethical approval

The professional association in your province has conducted this mail out. This study is Linda Ferguson's doctoral dissertation through the University of Alberta. The researcher does not have your name, and your decision to participate in this study is completely anonymous. Your employer and the professional association are not involved in this study, and will not have access to any data that you provide.

If you are willing to participate in this study, please e-mail Linda Ferguson at **linda.ferguson@usask.ca , call (306) 966-6264, or FAX: (306) 966-6703,** and leave a message indicating your willingness to participate. Please leave contact information so that I can contact you to provide additional information, answer your questions, and set up an appointment with you.

Thank you for considering this request.
Linda Ferguson, RN, MN, PhD candidate, Faculty of Nursing, University of Alberta

Appendix C: Information Letter

STUDY: A grounded theory study of the new nurse's journey toward competence in clinical judgement

My name is Linda Ferguson, PhD candidate, Faculty of Nursing, University of Alberta. I am conducting a research project titled "The new nurse's journey toward competence in clinical judgement." This study will involve registered nurses who have practiced on medical or surgical units for between two and three years following graduation from a basic baccalaureate nursing program. I am inviting you to participate in this research project.

Through this research, I will examine the process that new nurses experience as they develop their competence in clinical judgement. Data collection will consist of two or three interviews. The first interview will be a private face-to-face, one to one-and-a-half hour interview at a time and location of your choosing. I will audiotape and transcribe this interview. The second interview may last as long as 1 hour, following the same process. I will offer you the opportunity to review a summary and analysis your interviews as you wish. A third short interview may be required as data analysis continues. If such an interview is necessary, I will meet with you in person or by telephone.

All information that you provide will be kept in confidence. Transcripts and tapes will be kept in a secure locked filing cabinet for the period of the study. Your transcript will not be associated with your name, and will never made available to other individuals or your employer. I do not anticipate any harm to you as a result of your participation in this study. If the interviews distress you, I will arrange for referrals to mental health professionals within the health district. No direct benefits will accrue to you as a result of your participation. Nonetheless, this research is important and will contribute to our understanding of the process that new nurses experience in practice. The findings of this study may result in changes to educational or orientation programs in the future.

You are free to withdraw from the study at any time and the data that you have provided will be withdrawn. The design of the study necessitates on-going analysis and theory development, making it difficult to withdraw the effects of your data on that analysis. All information that you provide will be held in confidence, except when professional codes of ethics or legislation (or the law) require reporting. The information gathered for this study may be looked at again in the future to help us answer other study questions. If so, the ethics board will first review the proposed study to ensure that the information is used ethically.

The University of Alberta Research Ethics Board approved this study on June 20, 2003. The information that you provide will be kept for at least five years after the study is done. During this time, I will keep the information in a secure locked filing cabinet at the University of Saskatchewan. I will never use your name or other identifying information in any presentations or publications of the study results; I will use code names to report specific quotations from the interviews.

You may contact the Office of Research Services of the University of Alberta at (780) 492-0839 if you have any questions about the study or your rights as a participant in a research study.

If you are willing to be part of this study, you can contact me, Linda Ferguson, at the following number **(306) 966-6264**. You may also contact me by e-mail (linda.ferguson@usask.ca) or by **FAX (306) 966-6703**. At the start of the first interview, I will ask you review the information letter and letter of consent with me, and to sign the consent form, agreeing to participate in the study.

Thank you for considering your participation in this study.

Researcher

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Appendix D: Consent Form

STUDY: A grounded theory study of the new nurse's journey toward competence in clinical judgement

Part 1: Researcher Information

Name of Principal Investigator: Linda Ferguson, RN, MN, PhD student, Faculty of Nursing, University of Alberta.

Contact Information:
University of Saskatchewan, 107 Wiggins Road,
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Phone: (306) 966-6264 FAX: (306) 966-6703
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Name of Supervisor: Dr. Rene Day, PhD, Associate Dean and Professor, Faculty of Nursing
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Part 2: Consent of Subject	YES	NO
Do you understand that you have been asked to be in a research study?		
Have you read and received a copy of the attached information sheet?		
Do you understand the benefits and risks involved in taking part in this research study?		
Have you had an opportunity to ask questions and discuss the study?		
Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason and it will not affect you in any way.		
Has the issue of confidentiality been explained to you?		
Do you understand how the information will be kept confidential and who will have access to the information that you provide?		

Part 3: Signatures

This study was explained to me by:______________________________ Date:___________

I agree to take part in this study.

Signature of Research Participant______________________________

PrintedName______________________________

Witness (if available) Name:______________________________

Printed Name:______________________________

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Researcher:______________________________ Date:___________

* A copy of this consent form must be given to the subject.

Appendix E: Interview questions

Demographic Questions

Name:____________________ Date of Interview:__________

Age:__________Previous work history:____________________

____

Address: ____________________

Contact information:____________________

____

Place of employment: ____________________

Type of Nursing Unit:____________________

Date of initial employment as Registered Nurse: ____________________

Years (months) of employment on this unit: ____________________

Details of unit changes or reorganization: ____________________

____

Details of fourth year preceptored experiences: ____________________

____

General Interview Questions (Probes):

1. Describe your experiences of being a new nurse in this practice setting.
2. Describe your nursing practice when you first started on this nursing unit.
3. Has your nursing practice changed over your first two years of practice?
    a. Describe an incident from your early nursing practice, how you managed it then, and how you would manage it now.
4. Has your thinking about your client care changed over the past two years?
    a. Describe how you think differently now as compared to your early practice.
5. How does your current decision making compare with how you made decisions when you first started clinical practice?

6. Has your relationship with your clients or their families changed over the past two years?
    a. If so, describe the changes that you perceive.
7. What sources of information have you used over your first two years of practice?
    a. What other sources of information would you like to have available?
8. How do you describe clinical competence?
    a. In what aspects of your clinical practice do you consider yourself to be competent?
    b. What areas of your practice still need improvement?
    c. How will you develop that aspect of your practice?
9. How do you describe clinical judgement?
    a. How do you compare your clinical judgement to that of your colleagues?
    b. How has your clinical judgement changed over the last two years?
    c. What has helped you develop your clinical judgement?
10. In what ways did your basic nursing education affect your first two years of practice?
11. In what way did your basic educational programs prepare you to develop your clinical judgement?
12. What factors in the practice environment have affected the development of your nursing practice?
    a. in what way?
13. What advice would you give to a new graduate who is just starting practice in this setting?
14. How satisfied are you with your journey to develop your clinical judgement?

Note: These questions would guide the discussion of the nurse's first two years of practice, but would not necessarily be asked directly. I will follow the participants' lead in discussion of their development in clinical practice.

Appendix F: Tabular Summary of Participant Demographics (at the time of first interview)

No	Code Name	Grad Year	Age	Current Area of Practice	Years in Practice	Years in most recent site	Moved for learning or Challenge to…	Other Reasons for move	On first nsg unit	Child-ren	Precept-ed student on same unit	Ru ral
1	Tatyana	2001	24	Rural	2.5	2	Rural					√
2	Lucy	2001	31	Cardiol.	2.5	1.5	CCU				√	
3	Lori	2001	26	Surgery	2	2	New province					
4	Gracie	2001	27	Neuro	2	0.2	ICU					
5	Lynne	2001	26	OBS	3	3			√		√	
6	Carroll	2002	28	Surg	2.4	1.2		Family			√	
7	Elizabeth	2001	26	Med	2.5	2.5			√		√	
8	Rose	2001	24	OBS	2.5	2	Obstetrics	Stress		√	√	
9	Dawn	2001	28	Surg	2.5	2.5			√			
10	Kim	2002	24	OBS	1.5	1	Community					
11	Tony	2001	26	General	2.5	1.5			√	√		
12	Jamie	2001	28	Surg	2.4	0.4	Emerg	Family			√	
13	Monica	2003	24	Surg	1.2	1.2			√			
14	Sandy	2001	28	Surg	3	3			√		√	
15	Jody	2002	27	Surg	2	0.4	Emerg					
16	Nicky	2001	26	Rural	3	0.3	New setting	Family				√
17	Pat	2001	25	Peds	2.5	0.5	Teaching					
18	Ellen	2001	29	Peds	3	0.8	Comm Health					√
19	Darcy	2000	26	Surg	3.8	0.8	USA				√	
20	Terry	2000	34	Ortho	3.8	3	Emerg					
21	Chantelle	2000	39	Surg	3.5	0.2	Rural			√	√	√
22	Kara	2002	28	Ortho	2	1.8		Job moved				
23	Dale	2002	34	Surg	2	0.5	Emerg			√	√	
24	Gerry	2002	35	Surg	2	1		No FT work			√	
25	Anne	2002	27	Surg	2.2	1.2	New centre					